

Analytical Data Package Prepared For

Pacific Northwest National Lab

Radiochemical Analysis By

STL Richland STLRL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains _____ Pages

Report Nbr: 33199

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04970	A06-007	B1JK36	J6G220144-2	H9TN21AA	9H9TN210	6207523
		B1JK36	J6G220144-2	H9TN21AC	9H9TN210	6207520
		B1JK35	J6G220144-3	H9TPA1AA	9H9TPA10	6207523
		B1JK35	J6G220144-3	H9TPA1AC	9H9TPA10	6207520
		B1JK37	J6G220144-4	H9TPK1AA	9H9TPK10	6207523
		B1JK37	J6G220144-4	H9TPK1AC	9H9TPK10	6207520
		B1JK37	J6G220144-4	H9TPK1AD	9H9TPK10	6207522
		B1JK37	J6G220144-4	H9TPK1AE	9H9TPK10	6207510
		B1JK38	J6G220144-5	H9TP01AA	9H9TP010	6207523
		B1JK38	J6G220144-5	H9TP01AC	9H9TP010	6207520
		B1JK38	J6G220144-5	H9TP01AD	9H9TP010	6207522
		B1JK38	J6G220144-5	H9TP01AE	9H9TP010	6207510
	S06-006	B1J8L9	J6G240170-1	H9WL41AA	9H9WL410	6207510
	W06-007	B1JLH3	J6G240171-1	H9WMV1AA	9H9WMV10	6207510
		B1JLH0	J6G240173-1	H9WM51AA	9H9WM510	6207510

Comments:

Report Nbr: 33199

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04970	I06-049	B1JKW9	J6G240196-1	H9WW01AA	9H9WW010	6207523
		B1JKW9	J6G240196-1	H9WW01AC	9H9WW010	6207520
		B1JKW9	J6G240196-1	H9WW01AD	9H9WW010	6207525
		B1JKW9	J6G240196-1	H9WW01AE	9H9WW010	6207522
	A06-007	B1JK33	J6G240197-1	H9WW51AA	9H9WW510	6207523
		B1JK33	J6G240197-1	H9WW51AC	9H9WW510	6207520
		B1JK33	J6G240197-1	H9WW51AD	9H9WW510	6207522
		B1JK33	J6G240197-1	H9WW51AE	9H9WW510	6207510
	W06-007	B1JLJ5	J6G250296-1	H901A1AA	9H901A10	6207510
	S06-007	B1JLD3	J6G250319-1	H901Q1AA	9H901Q10	6207513
		B1JLD3	J6G250319-1	H901Q1AC	9H901Q10	6207517
		B1JLD3	J6G250319-1	H901Q1AD	9H901Q10	6207518
		B1JLD3	J6G250319-1	H901Q1AE	9H901Q10	6207520
		B1JLD3	J6G250319-1	H901Q1AG	9H901Q10	6207512
		B1JLD2	J6G250319-2	H90121AA	9H901210	6207513
		B1JLD2	J6G250319-2	H90121AC	9H901210	6207517
		B1JLD2	J6G250319-2	H90121AD	9H901210	6207518
		B1JLD2	J6G250319-2	H90121AE	9H901210	6207520
		B1JLD2	J6G250319-2	H90121AG	9H901210	6207512
	W06-008	B1K2H2	J6G250322-1	H90221AA	9H902210	6207523
		B1K2H2	J6G250322-1	H90221AC	9H902210	6207513
		B1K2H2	J6G250322-1	H90221AD	9H902210	6207517
		B1K2H2	J6G250322-1	H90221AE	9H902210	6207518
		B1K2H2	J6G250322-1	H90221AF	9H902210	6207522
	S06-007	B1JLC7	J6G250324-1	H903K1AA	9H903K10	6207523
		B1JLC9	J6G250324-2	H903L1AA	9H903L10	6207523

Comments:

Report Nbr: 33199

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04970	S06-007	B1JLC5	J6G250324-3	H903M1AA	9H903M10	6207523

Comments:

Certificate of Analysis

Pacific Northwest National Laboratories
Sigma V Building
Richland, WA 99352

September 8, 2006

Attention: Dot Stewart

SAF Number	:	A06-007, S06-006, W06-007, S06-007, I06-049, W06-008
Date SDG Closed	:	July 25, 2006
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W04970
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

Between July 21, 2006 and July 25, 2006, twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B1JK35	H9TPA	WATER	7/21/06
B1JK36	H9TN2	WATER	7/21/06
B1JK37	H9TPK	WATER	7/21/06
B1JK38	H9TP0	WATER	7/21/06
B1J8L9	H9WL4	WATER	7/24/06
B1JLH3	H9WMV	WATER	7/24/06
B1JLH0	H9WM5	WATER	7/24/06
B1JL17	H9WWV	WATER	7/24/06
B1JL19	H9WWW	WATER	7/24/06
B1JL20	H9WWX	WATER	7/24/06
B1JKW9	H9WW0	WATER	7/24/06
B1JK33	H9WW5	WATER	7/24/06
B1JLJ5	H901A	WATER	7/25/06

B1JLJ2	H901D	WATER	7/25/06
B1JLD3	H901Q	WATER	7/25/06
B1JLD2	H9012	WATER	7/25/06
B1K2H2	H9022	WATER	7/25/06
B1JLC7	H903K	WATER	7/25/06
B1JLC9	H903L	WATER	7/25/06
B1JLC5	H903M	WATER	7/25/06

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Alpha Spectroscopy

Uranium 234, 235 and 238 by method RICH-RC-5039

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Strontium-90 by method RICH-RC-5006

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017

Iodine-129 (LL) by method RICH-RC-5025

Liquid Scintillation Counting

Enriched Tritium by method RICH-RC-5024

Technetium-99 by TEVA method RICH-RC-5065

Tritium by method RICH-RC-5007

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Alpha Spectroscopy

Uranium 234, 235 and 238 by method RICH-RC-5039

The LCS, batch blank, samples and sample duplicate (B1JLD3) results are within contractual requirements.

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

Reduced volumes were analyzed based on elevated screen results for samples B1JLD2, B1JLD3, B1K2H2 and B1JLD2 DUP. Sample B1K2H2 does not meet CRDL due to high dissolved solids in the sample. Other than noted the LCS, batch blank, samples and sample duplicate (B1JLD2) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

B1K2H2 and B1K2H2 DUP do not meet the CRDL; reduced volumes were analyzed based on an elevated screen results. The results of these two samples are greater than the MDA which is greater than the CRDL. Other than noted, the LCS, batch blank, samples and sample duplicate (B1K2H2) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1JKW9) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017:

Sample B1K2H2 has a slightly elevated MDA (6.386 pCi/L compared to 6.0 pCi/L). This is due to the high background caused by the Compton Scattering of the large amount of Co60 found in the sample. Other than noted the LCS, batch blank, samples and sample duplicate (B1JLD3) results are within contractual requirements.

Iodine-129 (LL) by method RICH-RC-5025:

The LCS, batch blank, samples and sample duplicate (B1JK33) results are within contractual requirements.

Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1JK37), and sample matrix spike (B1JK38) results are within contractual requirements.

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1JLC7) results are within contractual requirements.

Enriched Tritium by method RICH-RC-5024

The enriched tritium analysis was not completed at the time of reporting.

Pacific Northwest National Laboratories
September 8, 2006

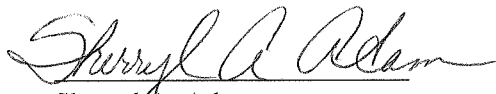
Total Uranium

Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1JLH0), and sample matrix spike (B1JLH3) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:


Sherryl A. Adam
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,...)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty</i> . The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \sqrt{2 * (BkgrndCnt / BkgrndCntMin) / SCntMin}) * (ConvFct / (Eff * Yld * Abn * Vol) * IngrFct)$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \sqrt{(BkgrndCnt / BkgrndCntMin) / SCntMin} + 2.71 / SCntMin) * (ConvFct / (Eff * Yld * Abn * Vol) * IngrFct)$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D) / [\sqrt{TPUs^2 + TPUD^2}]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUD is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

9/7/2006 2:29:32 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33199 File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H901210	B1JLD2		MW6-SBB-A1	S06-007	W04970					07/25/2006 10:01				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207513	ALPHA	12587-46-1	9.85E-01	pCi/L	9.3E-01	9.5E-01	U	1.55E+00	100.0	9310_ALPHABETA	5.62E-02	L	08/16/2006 11:46	I
6207517	BETA	12587-47-2	1.30E+01	pCi/L	1.6E+00	2.3E+00		2.02E+00	100.0	9310_ALPHABETA	1.98E-01	L	08/15/2006 09:56	I
6207518	BE-7	13966-02-4	1.34E+01	pCi/L	1.4E+01	1.4E+01	U	2.88E+01		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	CO-60	10198-40-0	4.25E-01	pCi/L	1.9E+00	1.9E+00	U	3.83E+00		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	CS-134	13967-70-9	3.74E-01	pCi/L	1.5E+00	1.5E+00	U	3.00E+00		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	CS-137	10045-97-3	-6.69E-01	pCi/L	1.4E+00	1.4E+00	U	2.44E+00		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	EU-152	14683-23-9	8.82E-01	pCi/L	3.9E+00	3.9E+00	U	7.27E+00		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	EU-154	15585-10-1	6.74E+00	pCi/L	4.3E+00	4.3E+00	U	1.07E+01		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	EU-155	14391-16-3	1.15E+00	pCi/L	4.0E+00	4.0E+00	U	7.14E+00		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	K-40	13966-00-2	2.43E+01	pCi/L	2.8E+01	2.8E+01	U	3.23E+01		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	RU-106	13967-48-1	-1.86E+01	pCi/L	1.7E+01	1.7E+01	U	2.60E+01		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207518	SB-125	14234-35-6	-7.30E-01	pCi/L	4.6E+00	4.6E+00	U	8.12E+00		GAMMALL_GS	2.0025E+00	L	08/09/2006 16:13	I
6207520	I-129L	15046-84-1	-3.38E-03	pCi/L	1.3E-01	1.3E-01	U	2.43E-01	85.4	I129LL_SEP_LEPS	3.9183E+00	L	08/30/2006 14:57	I
6207512	U-234	13966-29-5	8.39E-02	pCi/L	1.1E-01	1.1E-01	U	1.52E-01	97.1	UIISO_PLATE_AEA	2.039E-01	L	08/17/2006 10:56	I
6207512	U-235	15117-96-1	-7.30E-03	pCi/L	8.4E-03	8.5E-03	U	1.52E-01	97.1	UIISO_PLATE_AEA	2.039E-01	L	08/17/2006 10:56	I
6207512	U-238	U-238	1.58E-02	pCi/L	6.2E-02	6.2E-02	U	1.80E-01	97.1	UIISO_PLATE_AEA	2.039E-01	L	08/17/2006 10:56	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H901A10	B1JLJ5		MW6-SBB-A1	W06-007	W04970					07/25/2006 13:53				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207510	Uranium	7440-61-1	2.54E-02	ug/L	2.8E-03	2.8E-03	U	8.32E-02		UTOT_KPA	2.52E-02	ML	08/18/2006 11:42	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H901Q10	B1JLD3		MW6-SBB-A1	S06-007	W04970					07/25/2006 10:01				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207513	ALPHA	12587-46-1	5.92E-02	pCi/L	4.9E-01	4.9E-01	U	1.12E+00	100.0	9310_ALPHABETA	1.09E-01	L	08/16/2006 11:46	I
6207517	BETA	12587-47-2	1.12E+01	pCi/L	1.6E+00	2.2E+00		2.23E+00	100.0	9310_ALPHABETA	2.013E-01	L	08/15/2006 09:56	I
6207518	BE-7	13966-02-4	-4.25E+00	pCi/L	1.2E+01	1.2E+01	U	2.06E+01		GAMMALL_GS	1.9804E+00	L	08/09/2006 16:12	I
6207518	CO-60	10198-40-0	-1.40E+00	pCi/L	1.6E+00	1.6E+00	U	2.47E+00		GAMMALL_GS	1.9804E+00	L	08/09/2006 16:12	I
6207518	CS-134	13967-70-9	-8.65E-01	pCi/L	1.6E+00	1.6E+00	U	2.73E+00		GAMMALL_GS	1.9804E+00	L	08/09/2006 16:12	I

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

I

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

9/7/2006 2:29:32 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33199 File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

6207518	CS-137	10045-97-3	2.53E-01	pCi/L	1.3E+00	1.3E+00	U	2.54E+00		GAMMALL_GS	1.9804E+00	L	08/09/2006	16:12	I
6207518	EU-152	14683-23-9	3.07E+00	pCi/L	3.8E+00	3.8E+00	U	7.33E+00		GAMMALL_GS	1.9804E+00	L	08/09/2006	16:12	I
6207518	EU-154	15585-10-1	-2.34E+00	pCi/L	4.3E+00	4.3E+00	U	7.46E+00		GAMMALL_GS	1.9804E+00	L	08/09/2006	16:12	I
6207518	EU-155	14391-16-3	2.38E+00	pCi/L	2.7E+00	2.7E+00	U	5.41E+00		GAMMALL_GS	1.9804E+00	L	08/09/2006	16:12	I
6207518	K-40	13966-00-2	7.99E+00	pCi/L	3.5E+01	3.5E+01	U	1.71E+01		GAMMALL_GS	1.9804E+00	L	08/09/2006	16:12	I
6207518	RU-106	13967-48-1	-5.85E+00	pCi/L	1.4E+01	1.4E+01	U	2.47E+01		GAMMALL_GS	1.9804E+00	L	08/09/2006	16:12	I
6207518	SB-125	14234-35-6	-2.26E+00	pCi/L	3.4E+00	3.4E+00	U	5.76E+00		GAMMALL_GS	1.9804E+00	L	08/09/2006	16:12	I
6207520	I-129L	15046-84-1	2.22E-02	pCi/L	1.5E-01	1.5E-01	U	2.84E-01	89.5	I129LL_SEP_LEPS	3.9189E+00	L	08/30/2006	14:57	I
6207512	U-234	13966-29-5	3.28E-02	pCi/L	6.6E-02	6.6E-02	U	8.88E-02	84.4	UIISO_PLATE_AEA	1.988E-01	L	08/17/2006	10:53	I
6207512	U-235	15117-96-1	1.97E-02	pCi/L	6.8E-02	6.8E-02	U	1.85E-01	84.4	UIISO_PLATE_AEA	1.988E-01	L	08/17/2006	10:53	I
6207512	U-238	U-238	1.97E-02	pCi/L	6.8E-02	6.8E-02	U	1.85E-01	84.4	UIISO_PLATE_AEA	1.988E-01	L	08/17/2006	10:53	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9H902210	B1K2H2		MW6-SBB-A1	W06-008	W04970					07/25/2006 09:15				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	9.55E+04	pCi/L	9.8E+02	4.0E+03		2.85E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 07:43	I
6207513	ALPHA	12587-46-1	8.89E+00	pCi/L	8.5E+00	8.7E+00	U	1.45E+01	100.0	9310_ALPHABETA	1.15E-02	L	08/16/2006 15:25	I
6207517	BETA	12587-47-2	1.07E+04	pCi/L	1.4E+02	1.4E+03		3.31E+01	100.0	9310_ALPHABETA	1.27E-02	L	08/15/2006 09:56	I
6207518	BE-7	13966-02-4	4.89E+00	pCi/L	1.9E+01	1.9E+01	U	3.47E+01		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	CO-60	10198-40-0	2.90E+02	pCi/L	3.9E+01	3.9E+01		5.28E+00		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	CS-134	13967-70-9	1.83E+00	pCi/L	3.3E+00	3.3E+00	U	6.16E+00		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	CS-137	10045-97-3	7.76E-01	pCi/L	3.4E+00	3.4E+00	U	6.39E+00		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	EU-152	14683-23-9	1.68E+00	pCi/L	5.5E+00	5.5E+00	U	9.82E+00		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	EU-154	15585-10-1	1.28E+00	pCi/L	7.0E+00	7.0E+00	U	1.33E+01		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	EU-155	14391-16-3	-1.05E+00	pCi/L	5.5E+00	5.5E+00	U	9.51E+00		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	K-40	13966-00-2	-7.58E+00	pCi/L	3.6E+01	3.6E+01	U	7.59E+01		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	RU-106	13967-48-1	-1.86E+01	pCi/L	2.1E+01	2.1E+01	U	3.49E+01		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207518	SB-125	14234-35-6	1.31E+00	pCi/L	5.1E+00	5.1E+00	U	9.37E+00		GAMMALL_GS	1.9738E+00	L	08/09/2006 16:14	I
6207522	TC-99	14133-76-7	4.29E+04	pCi/L	1.1E+02	2.9E+03		1.00E+01	100.0	TC99_ETVDSK_LS	1.25E-01	L	08/06/2006 04:30	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9H903K10	B1JLC7		MW6-SBB-A1	S06-007	W04970					07/25/2006 08:50				

STL Richland

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

9/7/2006 2:29:32 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33199 File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	2.79E+03	pCi/L	2.0E+02	2.5E+02		2.85E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 09:05	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9H903L10	B1JLC9		MW6-SBB-A1	S06-007	W04970					07/25/2006 08:31

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	2.84E+03	pCi/L	2.1E+02	2.6E+02		3.04E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 15:54	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9H903M10	B1JLC5		MW6-SBB-A1	S06-007	W04970					07/25/2006 09:08

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	1.23E+04	pCi/L	3.8E+02	6.5E+02		3.03E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 17:16	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9H9TN210	B1JK36		MW6-SBB-A1	A06-007	W04970					07/21/2006 10:29

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	9.33E+01	pCi/L	1.2E+02	1.3E+02	U	2.84E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/01/2006 23:32	I
6207520	I-129L	15046-84-1	1.01E-01	pCi/L	1.4E-01	1.4E-01	U	2.81E-01	88.4	I129LL_SEP_LEPS	3.9076E+00	L	08/30/2006 11:28	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9H9TP010	B1JK38		MW6-SBB-A1	A06-007	W04970					07/21/2006 07:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	9.76E+01	pCi/L	1.2E+02	1.3E+02	U	2.86E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 03:38	I
6207520	I-129L	15046-84-1	-3.16E-01	pCi/L	1.7E-01	1.7E-01	U	2.23E-01	88.4	I129LL_SEP_LEPS	3.9159E+00	L	08/30/2006 13:12	I
6207522	TC-99	14133-76-7	1.35E+00	pCi/L	4.1E+00	6.3E+00	U	9.92E+00	100.0	TC99_ETVDSK_LS	1.25E-01	L	08/06/2006 04:29	I
6207510	Uranium	7440-61-1	1.25E-02	ug/L	1.3E-03	1.3E-03	U	8.19E-02		UTOT_KPA	2.56E-02	ML	08/18/2006 11:19	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9H9TPA10	B1JK35		MW6-SBB-A1	A06-007	W04970					07/21/2006 12:11

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	1.43E+03	pCi/L	1.7E+02	1.9E+02		2.86E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 00:54	I
6207520	I-129L	15046-84-1	3.50E-02	pCi/L	1.4E-01	1.4E-01	U	2.68E-01	84.3	I129LL_SEP_LEPS	3.9137E+00	L	08/30/2006 11:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

3

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

9/7/2006 2:29:32 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33199 File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

9H9TPK10	B1JK37	MW6-SBB-A1	A06-007	W04970											07/21/2006 09:20	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act		
6207523	H-3	10028-17-8	1.92E+03	pCi/L	1.8E+02	2.2E+02		2.84E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 02:16	I		
6207520	I-129L	15046-84-1	-2.96E-02	pCi/L	1.5E-01	1.5E-01	U	2.79E-01	83.8	I129LL_SEP_LEPS	3.9137E+00	L	08/30/2006 13:12	I		
6207522	TC-99	14133-76-7	1.83E+02	pCi/L	8.4E+00	1.8E+01		9.93E+00	100.0	TC99_ETVDSK_LS	1.25E-01	L	08/06/2006 04:29	I		
6207510	Uranium	7440-61-1	9.52E+00	ug/L	1.1E+00	1.1E+00		8.55E-02		UTOT_KPA	2.45E-02	ML	08/18/2006 11:18	I		

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H9WL410	B1J8L9		MW6-SBB-A1	S06-006	W04970					07/24/2006 12:12				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207510	Uranium	7440-61-1	3.74E+01	ug/L	4.4E+00	4.4E+00		8.55E-02		UTOT_KPA	2.45E-02	ML	08/18/2006 11:24	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H9WM510	B1JLH0		MW6-SBB-A1	W06-007	W04970					07/24/2006 13:09				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207510	Uranium	7440-61-1	5.42E+01	ug/L	6.4E+00	6.4E+00		8.42E-02		UTOT_KPA	2.49E-02	ML	08/18/2006 11:35	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H9WMV10	B1JLH3		MW6-SBB-A1	W06-007	W04970					07/24/2006 10:48				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207510	Uranium	7440-61-1	1.48E-02	ug/L	1.6E-03	1.6E-03	U	8.35E-02		UTOT_KPA	2.51E-02	ML	08/18/2006 11:26	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H9WW010	B1JKW9		MW6-SBB-A1	I06-049	W04970					07/24/2006 10:59				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	7.68E+02	pCi/L	1.5E+02	1.6E+02		2.86E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 04:59	I
6207520	I-129L	15046-84-1	-6.11E-02	pCi/L	1.3E-01	1.3E-01	U	2.25E-01	88.6	I129LL_SEP_LEPS	3.9221E+00	L	08/30/2006 13:13	I
6207525	SR-90	10098-97-2	2.04E-01	pCi/L	1.6E-01	1.8E-01	U	3.61E-01	87.3	SRISO_SEP_PRE	1.0006E+00	L	09/07/2006 06:57	I
6207522	TC-99	14133-76-7	6.79E+01	pCi/L	6.1E+00	1.1E+01		9.89E+00	100.0	TC99_ETVDSK_LS	1.25E-01	L	08/06/2006 04:30	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H9WW510	B1JK33		MW6-SBB-A1	A06-007	W04970					07/24/2006 11:46				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6207523	H-3	10028-17-8	1.51E+03	pCi/L	1.7E+02	2.0E+02		2.86E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/02/2006 06:21	I

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

4

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

9/7/2006 2:29:32 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33199 File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

6207520	I-129L	15046-84-1	3.03E-02	pCi/L	1.5E-01	1.5E-01	U	2.80E-01	88.4	I129LL_SEP_LEPS	3.9472E+00	L	08/30/2006	14:56	I
6207522	TC-99	14133-76-7	9.43E+01	pCi/L	6.7E+00	1.2E+01		9.89E+00	100.0	TC99_ETVDSK_LS	1.25E-01	L	08/06/2006	04:30	I
6207510	Uranium	7440-61-1	7.82E-01	ug/L	8.0E-02	8.0E-02		8.48E-02		UTOT_KPA	2.47E-02	ML	08/18/2006	11:40	I

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W04970.Edd, h:\Reportdb\eddd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93E31AB

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/25/2006 10:01

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207513	ALPHA	2.31E-02	pCi/L	1.6E-01	U	3.85E-01	100.0		9310_ALPHAB	2.003E-01	08/16/2006				D
BLK	12587-46-1			1.6E-01							15:25				

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93E61AB

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/25/2006 09:15

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								AX	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207517 BLK	BETA 12587-47-2	2.13E+00	pCi/L	1.0E+00 1.0E+00		1.83E+00	100.0		9310_ALPHAB	2.028E-01 L	08/15/2006 09:56				D

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93EQ1AB

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/24/2006 13:09

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/24/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AZ	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207510 BLK	Uranium 7440-61-1	7.35E-03	ug/L	8.2E-04 8.2E-04	U	8.45E-02			UTOT_KPA	2.48E-02 ML	08/18/2006 11:08				D

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93EX1AB

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 10:01

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/25/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
		MW6-SBB-A19981																BC		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207512 BLK	U-234 13966-29-5	1.69E-02	pCi/L	6.6E-02 6.6E-02	U	1.93E-01	93.4		UIISO_PLATE_	2.033E-01 L	08/17/2006 10:56				D						
6207512 BLK	U-235 15117-96-1	-7.79E-03	pCi/L	9.1E-03 9.0E-03	U	1.62E-01	93.4		UIISO_PLATE_	2.033E-01 L	08/17/2006 10:56				D						
6207512 BLK	U-238 U-238	-1.30E-02	pCi/L	1.2E-02 1.2E-02	U	1.83E-01	93.4		UIISO_PLATE_	2.033E-01 L	08/17/2006 10:56				D						

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93F11AB

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 08:50

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BE	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207523	H-3	1.30E+02	pCi/L	1.4E+02	U	3.02E+02	100.0		906.0_H3_LSC	5.00E-03	08/02/2006				D
BLK	10028-17-8			1.3E+02						L	11:49				

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93F11DX

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 08:50

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BG	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207523	H-3	6.86E+01	pCi/L	1.3E+02	U	2.86E+02	100.0		906.0_H3_LSC	5.00E-03	08/01/2006				D
BLK	10028-17-8			1.2E+02						L	20:49				

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93F31AB

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/24/2006 10:59

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/24/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BI	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207525	SR-90	1.76E-01	pCi/L	2.0E-01	U	4.07E-01	81.2		SRISO_SEP_P	9.999E-01	09/07/2006				D
BLK	10098-97-2			1.9E-01						L	06:57				

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93FA1AB

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 09:15

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BK	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207518 BLK	BE-7 13966-02-4	1.65E+00	pCi/L	1.9E+01 1.9E+01	U	3.53E+01			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	CO-60 10198-40-0	-1.66E+00	pCi/L	2.5E+00 2.5E+00	U	4.20E+00			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	CS-134 13967-70-9	-2.80E-01	pCi/L	3.0E+00 3.0E+00	U	5.47E+00			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	CS-137 10045-97-3	-2.70E+00	pCi/L	2.0E+00 2.0E+00	U	2.81E+00			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	EU-152 14683-23-9	5.06E+00	pCi/L	5.4E+00 5.4E+00	U	1.09E+01			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	EU-154 15585-10-1	5.86E+00	pCi/L	6.0E+00 6.0E+00	U	1.43E+01			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	EU-155 14391-16-3	-1.32E+00	pCi/L	4.2E+00 4.2E+00	U	7.31E+00			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	K-40 13966-00-2	2.79E+01	pCi/L	4.5E+01 4.5E+01	U	5.45E+01			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	RU-106 13967-48-1	-9.95E+00	pCi/L	1.6E+01 1.6E+01	U	2.73E+01			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D
6207518 BLK	SB-125 14234-35-6	-8.30E-01	pCi/L	5.4E+00 5.4E+00	U	9.63E+00			GAMMALL_GS	1.9997E+00 L	08/09/2006 16:15				D

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93FK1AB

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/21/2006 10:29

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								BM	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207520	I-129L	5.67E-02	pCi/L	1.6E-01	U	3.06E-01	82.2		I129LL_SEP_L	3.9052E+00	08/30/2006				D
BLK	15046-84-1			1.6E-01						L	17:04				

Thursday, September 07, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93FX1AB

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/21/2006 09:20

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 07/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207522	TC-99	-5.21E-01	pCi/L	6.1E+00	U	9.90E+00	100.0		TC99_ETVDSK	1.25E-01	08/06/2006				D
BLK	14133-76-7			4.1E+00							04:30				

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W04970.Edd, h:\Reportdb\eddd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93E31CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 10:01

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								AW	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207513	ALPHA	2.03E+01	pCi/L	4.3E+00		4.13E-01	100.0	2.28E+01	9310_ALPHAB	2.003E-01	08/16/2006			70	D
BS	12587-46-1			1.5E+00				89.2		L	15:25			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93E61CS

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/25/2006 09:15

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								AY	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207517	BETA	2.24E+01	pCi/L	4.7E+00		1.61E+00	100.0	2.28E+01	9310_ALPHAB	2.003E-01	08/15/2006			70	D
BS	12587-47-2			1.6E+00				98.1		L	09:56			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93EQ1CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/24/2006 13:09

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/24/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BA	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207510	Uranium	3.58E+01	ug/L	4.2E+00		8.42E-02		3.62E+01	UTOT_KPA	2.49E-02	08/18/2006			70	D
BS	7440-61-1			4.2E+00				98.8		ML	11:12			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93EQ1DS

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/24/2006 13:09

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/24/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								BB	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207510	Uranium	3.56E+00	ug/L	3.6E-01		8.42E-02		3.64E+00	UTOT_KPA	2.49E-02	08/18/2006			70	D
BS	7440-61-1			3.6E-01				98.0		ML	11:14			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93EX1CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 10:01

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BD	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207512	U-234	7.99E+00	pCi/L	1.8E+00		2.95E-01	87.4	8.74E+00	UIISO_PLATE_	2.001E-01	08/17/2006			70	D
BS	13966-29-5			1.3E+00				91.5		L	10:57			130	
6207512	U-238	8.81E+00	pCi/L	1.9E+00		2.28E-01	87.4	9.15E+00	UIISO_PLATE_	2.001E-01	08/17/2006			70	D
BS	U-238			1.3E+00				96.2		L	10:57			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93F11CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 08:50

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BF	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207523	H-3	2.59E+03	pCi/L	2.5E+02		3.02E+02	100.0	2.72E+03	906.0_H3_LSC	5.00E-03	08/02/2006			70	D
BS	10028-17-8			2.0E+02				95.3		L	13:10			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93F11EM

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 08:50

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/25/2006

SAF Nbr		Contract Nbr		Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp			
		MW6-SBB-A19981									BH	H			
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207523	H-3	2.47E+03	pCi/L	2.4E+02		2.87E+02	100.0	2.72E+03	906.0_H3_LSC	5.00E-03	08/01/2006			70	D
BS	10028-17-8			2.0E+02				91.0		L	22:11			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93F31CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/24/2006 10:59

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/24/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								BJ	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207525	SR-90	1.25E+01	pCi/L	2.0E+00		3.85E-01	89.9	1.38E+01	SRISO_SEP_P	1.0003E+00	09/07/2006			70	D
BS	10098-97-2			6.0E-01				90.5		L	06:57			130	

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93FA1CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 09:15

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/25/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
		MW6-SBB-A19981																BL		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207518 BS	CO-60 10198-40-0	3.85E+01	pCi/L	8.8E+00 8.8E+00		4.99E+00		3.80E+01 101.3	GAMMALL_GS	2.0026E+00 L	08/09/2006 16:15			70 130	D						
6207518 BS	CS-137 10045-97-3	2.17E+01	pCi/L	6.0E+00 6.0E+00		4.43E+00		2.49E+01 86.9	GAMMALL_GS	2.0026E+00 L	08/09/2006 16:15			70 130	D						
6207518 BS	EU-152 14683-23-9	7.90E+01	pCi/L	1.7E+01 1.7E+01	U	2.62E+01		7.66E+01 103.1	GAMMALL_GS	2.0026E+00 L	08/09/2006 16:15			70 130	D						

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93FK1CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/21/2006 10:29

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/21/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
		MW6-SBB-A19981																BN		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207520	I-129L	7.78E+00	pCi/L	1.1E+00		4.29E-01	88.5		I129LL_SEP_L	3.9178E+00	08/30/2006				D						
BS	15046-84-1			1.1E+00						L	17:05										

Thursday, September 07, 2006

STL Richland QC Control Sample Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H93FX1CS

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/21/2006 09:20

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 07/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								BP	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R. Typ
6207522	TC-99	5.21E+02	pCi/L	4.1E+01		9.99E+00	100.0	5.41E+02	TC99_ETVDSK	1.25E-01	08/06/2006			70	D
BS	14133-76-7			1.3E+01				96.2		L	04:30			130	

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\Fead\I\Rad\W04970.Edd, h:\Reportdb\eddd\Fead\I\Rad\33199.Edd

Lab Sample Id: H90121HR

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/25/2006 10:01

Client Id: B1JLD2

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S06-007	MW6-SBB-A19981								AQ	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207513	ALPHA	-1.17E-01	pCi/L	8.4E-01	U	2.03E+00	100.0		9310_ALPHAB	5.61E-02	08/16/2006	253.8	1.9		D
DUP	12587-46-1	9.85E-01		8.4E-01						L	15:25	20.0	3		

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H901Q1HR

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 10:01

Client Id: B1JLD3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/25/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
S06-007		MW6-SBB-A19981																AR		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207512	U-234	5.10E-02	pCi/L	9.2E-02	U	1.80E-01	96.5		UIISO_PLATE_	1.993E-01	08/17/2006	43.6	0.3		D						
DUP	13966-29-5	3.28E-02		9.2E-02						L	10:54	20.0	3								
6207512	U-235	0.00E+00	pCi/L	7.8E-02	U	8.64E-02	96.5		UIISO_PLATE_	1.993E-01	08/17/2006	200.0	0.4		D						
DUP	15117-96-1	1.97E-02		7.8E-02						L	10:54	20.0	3								
6207512	U-238	0.00E+00	pCi/L	7.8E-02	U	8.64E-02	96.5		UIISO_PLATE_	1.993E-01	08/17/2006	200.0	0.4		D						
DUP	U-238	1.97E-02		7.8E-02						L	10:54	20.0	3								

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H901Q1JR

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 10:01

Client Id: B1JLD3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S06-007	MW6-SBB-A19981								AS	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207518	BE-7	8.84E+00	pCi/L	1.9E+01	U	3.47E+01			GAMMALL_GS	1.9804E+00	08/09/2006	571.0	1.		D
DUP	13966-02-4	-4.25E+00		1.9E+01						L	16:13	20.0	3		
6207518	CO-60	1.07E+00	pCi/L	2.1E+00	U	4.38E+00			GAMMALL_GS	1.9804E+00	08/09/2006	0.0	1.6		D
DUP	10198-40-0	-1.40E+00		2.1E+00						L	16:13	20.0	3		
6207518	CS-134	-1.07E+00	pCi/L	2.4E+00	U	4.13E+00			GAMMALL_GS	1.9804E+00	08/09/2006	0.0	0.1		D
DUP	13967-70-9	-8.65E-01		2.4E+00						L	16:13	20.0	3		
6207518	CS-137	-1.06E-01	pCi/L	2.3E+00	U	4.06E+00			GAMMALL_GS	1.9804E+00	08/09/2006	490.7	0.2		D
DUP	10045-97-3	2.53E-01		2.3E+00						L	16:13	20.0	3		
6207518	EU-152	-7.63E-01	pCi/L	5.6E+00	U	9.70E+00			GAMMALL_GS	1.9804E+00	08/09/2006	332.1	1.		D
DUP	14683-23-9	3.07E+00		5.6E+00						L	16:13	20.0	3		
6207518	EU-154	3.43E+00	pCi/L	7.9E+00	U	1.52E+01			GAMMALL_GS	1.9804E+00	08/09/2006	1051.6	1.		D
DUP	15585-10-1	-2.34E+00		7.9E+00						L	16:13	20.0	3		
6207518	EU-155	1.53E+00	pCi/L	6.2E+00	U	1.07E+01			GAMMALL_GS	1.9804E+00	08/09/2006	43.2	0.2		D
DUP	14391-16-3	2.38E+00		6.2E+00						L	16:13	20.0	3		
6207518	K-40	-1.13E+02	pCi/L	6.3E+01	U	1.31E+02			GAMMALL_GS	1.9804E+00	08/09/2006	0.0	2.7		D
DUP	13966-00-2	7.99E+00		6.3E+01						L	16:13	20.0	3		
6207518	RU-106	7.92E+00	pCi/L	1.8E+01	U	3.46E+01			GAMMALL_GS	1.9804E+00	08/09/2006	1333.2	1.1		D
DUP	13967-48-1	-5.85E+00		1.8E+01						L	16:13	20.0	3		
6207518	SB-125	-2.51E+00	pCi/L	5.5E+00	U	9.32E+00			GAMMALL_GS	1.9804E+00	08/09/2006	0.0	0.1		D
DUP	14234-35-6	-2.26E+00		5.5E+00						L	16:13	20.0	3		

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H90221GR

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/25/2006 09:15

Client Id: B1K2H2

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/25/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
W06-008		MW6-SBB-A19981																AT		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207517	BETA	1.04E+04	pCi/L	1.3E+03		3.18E+01	100.0		9310_ALPHAB	1.27E-02	08/15/2006	3.0	0.3		D						
DUP	12587-47-2	1.07E+04		1.4E+02						L	09:56	20.0	3								

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H903K1CR

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/25/2006 08:50

Client Id: B1JLC7

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/25/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
S06-007	MW6-SBB-A19981								AU	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207523	H-3	3.04E+03	pCi/L	2.7E+02		3.02E+02	100.0		906.0_H3_LSC	5.00E-03	08/02/2006	8.6	1.3		D
DUP	10028-17-8	2.79E+03		2.2E+02						L	14:32	20.0	3		

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H9TN21DR

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/21/2006 10:29

Client Id: B1JK36

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
A06-007	MW6-SBB-A19981								BQ	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6207520	I-129L	6.54E-02	pCi/L	1.5E-01	U	2.98E-01	86.5		I129LL_SEP_L	3.9264E+00	08/30/2006	43.3	0.3		D
DUP	15046-84-1	1.01E-01		1.5E-01						L	11:28	20.0	3		

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H9TPK1FR

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/21/2006 09:20

Client Id: B1JK37

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/21/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
A06-007		MW6-SBB-A19981																BS		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207522	TC-99	1.74E+02	pCi/L	1.8E+01		9.95E+00	100.0		TC99_ETVDSK	1.25E-01	08/06/2006	4.9	0.7		D						
DUP	14133-76-7	1.83E+02		8.3E+00						L	04:29	20.0	3								

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H9WM51CR

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/24/2006 13:09

Client Id: B1JLH0

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/24/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
W06-007		MW6-SBB-A19981																BT		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207510	Uranium	5.53E+01	ug/L	6.5E+00		8.28E-02			UTOT_KPA	2.53E-02	08/18/2006	1.9	0.2		D						
DUP	7440-61-1	5.42E+01		6.5E+00						ML	11:38	20.0	3								

Thursday, September 07, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H9WW01FR

Sdg/Rept Nbr: W04970 33199

Collection Date: 07/24/2006 10:59

Client Id: B1JKW9

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 07/24/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
106-049	MW6-SBB-A19981														
6207525	SR-90	6.99E-02	pCi/L	1.7E-01	U	3.58E-01	94.9		SRISO_SEP_P	9.998E-01	09/07/2006	98.0	1.1		D
DUP	10098-97-2	2.04E-01		1.2E-01						L	06:57	20.0	3		

Thursday, September 07, 2006

STL Richland Qc Matrix Spike Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H9TP01FW

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/21/2006 07:45

Client Id: B1JK38

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: MS

Received Date: 07/21/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp		
A06-007		MW6-SBB-A19981																BR		H		
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ							
6207522	TC-99	3.44E+03	pCi/L	2.4E+02		9.90E+00	100.0	3.62E+03	TC99_ETVDSK	1.251E-01	08/06/2006			60	D							
MS	14133-76-7			3.2E+01				95.1		L	04:29			140								

Thursday, September 07, 2006

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04970.Edd, h:\Reportdb\edd\FeadIV\Rad\33199.Edd

Lab Sample Id: H9WMV1CW

Sdg/Rept Nbr: W04970

33199

Collection Date: 07/24/2006 10:48

Client Id: B1JLH3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: MS

Received Date: 07/24/2006

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
W06-007		MW6-SBB-A19981																BU		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
6207510	Uranium	3.43E+01	ug/L	4.0E+00		8.25E-02		3.55E+01	UTOT_KPA	2.54E-02	08/18/2006			60	D						
MS	7440-61-1			4.0E+00				96.7		ML	11:28			140							

Lot No., Due Date: J6G250322,J6G250324,J6G220144,J6G240196,J6G240197; 09/08/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6207523; RTRITIUM H-3 by LSC
SDG, Matrix: W04970; WATER

8.0	Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01	The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02	Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03	Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04	The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05	Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06	At Least the Minimum Sample Volume Was Used Analysis Volume => H9TN21AA 5.00<10.00 H9TPA1AA 5.00<10.00 H9TPK1AA 5.00<10.00 H9TP01AA 5.00<10.00 H9WW01AA 5.00<10.00 H9WW51AA 5.00<10.00 H90221AA 5.00<10.00 H903K1AA 5.00<10.00 H903L1AA 5.00<10.00 H903M1AA 5.00<10.00 Q:VB	Yes	No	N/A
8.07	The Correct Count Geometry was Used. Count Geometry => H93F11AF SVP15/5<>SVP10/10 H93F11AG SVP15/5<>SVP10/10 H93F11AD SVP15/5<>SVP10/10 H93F11AE SVP15/5<>SVP10/10 H9TN21AA SVP15/5<>SVP10/10 H9TPA1AA SVP15/5<>SVP10/10 H9TPK1AA SVP15/5<>SVP10/10 H93F11AH SVP15/5<>SVP10/10 H9TP01AA SVP15/5<>SVP10/10 H9WW01AA SVP15/5<>SVP10/10 H9WW51AA SVP15/5<>SVP10/10 H90221AA SVP15/5<>SVP10/10 H903K1AA SVP15/5<>SVP10/10 H93F11AA SVP15/5<>SVP10/10 H93F11AC SVP15/5<>SVP10/10 H903K1AC SVP15/5<>SVP10/10 H903L1AA SVP15/5<>SVP10/10 H903M1AA SVP15/5<>SVP10/10 Q:VC	Yes	No	N/A
8.08	The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09	Method Blank is within Control Limits. OK	Yes	No	N/A
8.1	Comments:			
8.11	Matrix Blank is within Control Limits. OK	Yes	No	N/A
8.12	Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13	QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	Yes	No	N/A
8.14	LCS within Control Limits. OK	Yes	No	N/A
8.15	MLCS within Control Limits. OK	Yes	No	N/A
8.16	MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	Yes	No	N/A

8.17 Tracer within Control Limits. No Tracers found in Batch!	Yes	No	N/A
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) No Tracers found in Batch!	Yes	No	N/A
8.19 Sample Specific MDC <= CRDL. OK	Yes	No	N/A
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22 Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK Calc_IDL Not Calculated	Yes	No	N/A
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => H-3 OK; No Callin Level Found => H-3	Yes	No	N/A
8.24 Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A
8.25 Counting Spectrum are within FWHM Limits. No FWHM found in Batch Data!	Yes	No	N/A
8.26 Instruments have Current Calibrations.	Yes	No	N/A
8.27 Correct Count Library Used. No Count Library found in Batch Data!	Yes	No	N/A
8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A
8.3 Comments:			
8.31 Results Blank Subtracted as Appropriate. OK	Yes	No	N/A

First Level Review

Pam Anderson

Date *8-4-06*



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6207523
W04970

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Nonconformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Sherryll R Adams Date: 8-7-06

7/26/2006 4:06:27 PM

Sample Preparation/Analysis

Balance Id: 12445

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National LabAR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/04/2006

Sep1 DT/Tm Tech: 7-31-06 ow

Batch: 6207523 WATER

pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: _____

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H9TN2-1-AA								
J6G220144-2-SAMP								
07/21/2006 10:29		AmtRec: 20ML,3XLP	#Containers: 4			Scr: Alpha: 2.43E-03 uCi/Sa	Beta: -1.64E-03 uCi/Sa	
2 H9TPA-1-AA								
J6G220144-3-SAMP								
07/21/2006 12:11		AmtRec: 20ML,3XLP	#Containers: 4			Scr: Alpha: -4.27E-04 uCi/Sa	Beta: 2.84E-04 uCi/Sa	
3 H9TPK-1-AA								
J6G220144-4-SAMP								
07/21/2006 09:20		AmtRec: 20ML,2X500MLP,LP,2X4LP	#Containers: 6			Scr: Alpha: -2.36E-03 uCi/Sa	Beta: 7.92E-04 uCi/Sa	
4 H9TP0-1-AA								
J6G220144-5-SAMP								
07/21/2006 07:45		AmtRec: 20ML,2X500MLP,LP,2X4LP	#Containers: 6			Scr: Alpha: -8.56E-05 uCi/Sa	Beta: 4.35E-04 uCi/Sa	
5 H9WW0-1-AA								
J6G240196-1-SAMP								
07/24/2006 10:59		AmtRec: 20ML,500ML,4XLP,2X4LP	#Containers: 8			Scr: Alpha:	Beta:	
6 H9WW5-1-AA								
J6G240197-1-SAMP								
07/24/2006 11:46		AmtRec: 20ML,2X500ML,LP,2X4LP	#Containers: 6			Scr: Alpha:	Beta:	
7 H9022-1-AA								
J6G250322-1-SAMP								
07/25/2006 09:15		AmtRec: 20ML,125ML,250ML,2XLP	#Containers: 5			Scr: Alpha:	Beta:	

7/26/2006 4:06:28 PM

Sample Preparation/Analysis

Balance Id: 12445

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National LabAR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/04/2006

Sep1 DT/Tm Tech: 7-31-06oom

Batch: 6207523 WATER








pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 H903K-1-AA								
J6G250324-1-SAMP								
								
07/25/2006 08:50		AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
9 H903K-1-AC-X								
J6G250324-1-DUP								
								
07/25/2006 08:50		AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
10H903L-1-AA								
J6G250324-2-SAMP								
								
07/25/2006 08:31		AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
11H903M-1-AA								
J6G250324-3-SAMP								
								
07/25/2006 09:08		AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
12H93F1-1-AA-B								
J6G260000-523-BLK								
								
07/25/2006 08:50		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
13H93F1-1-AC-C								
J6G260000-523-LCS								
								
07/25/2006 08:50		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
14H93F1-1-AD-BX								
J6G260000-523-MBLK								
								
07/25/2006 08:50		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

7/26/2006 4:06:29 PM

Sample Preparation/Analysis

Balance Id: 12445

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/04/2006

Sep1 DT/Tm Tech: 7-31-06com





Batch: 6207523

pCi/L

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: _____

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15H93F1-1-AE-CM								
J6G260000-523-MLCS								
								
07/25/2006 08:50		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
16H93F1-1-AF-BN								
J6G260000-523-IBLK								
								
07/25/2006 08:50		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
17H93F1-1-AG-BN								
J6G260000-523-IBLK								
								
07/25/2006 08:50		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
18H93F1-1-AH-B								
J6G260000-523-BLK								
								
07/25/2006 08:50		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, HC , 57671

H9TN21AA-SAMP Constituent List:

H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
H93F11AA-BLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:
H93F11AC-LCS:					
H-3	RDL:400	pCi/L	LCL:70	UCL:130	RPD:20
H93F11AD-MBLK:					
H-3	RDL:400	pCi/L	LCL:	UCL:	RPD:

7/26/2006 4:06:30 PM

Sample Preparation/Analysis

Balance Id:

10445

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 09/04/2006

Sep1 DT/Tm Tech:

731-062m

Batch: 6207523

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

H93F11AE-MLCS:

H-3 RDL:400 pCi/L LCL:70 UCL:130 RPD:20

H93F11AF-IBLK:

H-3 RDL:400 pCi/L LCL: UCL: RPD:

H93F11AG-IBLK:

H-3 RDL:400 pCi/L LCL: UCL: RPD:

H93F11AH-BLK:

H-3 RDL:400 pCi/L LCL: UCL: RPD:

H9TN21AA-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93F11AA-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93F11AC-LCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93F11AD-MBLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93F11AE-MLCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93F11AF-IBLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93F11AG-IBLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93F11AH-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By

Date:

8/3/2006 4:24:22 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/3/2005, 8/8/2006, Batch: '6207523', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting		Comments
6207523					
AC	CalcC	McDowellID	7/31/2006 8:51:12		
SC		wagarr	IsBatched	7/26/2006 4:08:34 PM	ICOC_RADCALC v4.8.24
SC		McDowellID	InSep1	7/31/2006 8:51:12 AM	RICH-RC-5007 REVISION 6
SC		McDowellID	Sep1C	7/31/2006 11:05:18 AM	RICH-RC-5007 REVISION 6
SC		BlackCL	InCnt1	7/31/2006 1:20:32 PM	RICH-RD-0001 REVISION 3
SC		BlackCL	CalcC	8/3/2006 7:18:34 AM	RICH-RD-0001 REVISION 3
AC		McDowellID	7/31/2006 11:05:18		
AC		McDowellID	7/31/2006 1:18:08 PM		
AC		BlackCL	7/31/2006 1:20:32 PM		
AC		BlackCL	8/3/2006 7:18:34 AM		

Lot No., Due Date: J6G250319, J6G250322; 09/08/2006
Client, Site: 384868; PGW 615 HANFORD HANFORD
QC Batch No., Method Test: 6207518; RGAMMA Gamma by GER
SDG, Matrix: W04970; WATER

1.0 COC

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes ☒ No ☐ N/A ☐

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes ☒ No ☐ N/A ☐

2.2 Are the QC appropriate for the analysis included in the batch? Yes ☒ No ☐ N/A ☐

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes ☒ No ☐ N/A ☐

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes ☐ No ☐ N/A ☒

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes ☒ No ☐ N/A ☐

3.2 Is the LCS result, yield, and MDA within contract limits? Yes ☒ No ☐ N/A ☐

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes ☐ No ☐ N/A ☒

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes ☒ No ☐ N/A ☐

3.5 Are the sample yields and MDAs within contract limits? Yes ☒ No ☐ N/A ☐

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes ☒ No ☐ N/A ☐

4.2 Were analysis volumes entered correctly? Yes ☒ No ☐ N/A ☐

4.3 Were Yields entered correctly? Yes ☐ No ☐ N/A ☒

4.4 Were spectra reviewed/meet contractual requirements? Yes ☒ No ☐ N/A ☐

4.5 Were raw counts reviewed for anomalies? Yes ☒ No ☐ N/A ☐

5.0 Other

5.1 Are all nonconformances included and noted? Yes ☐ No ☐ N/A ☒

5.2 Are all required forms filled out? Yes ☒ No ☐ N/A ☐

5.3 Was the correct methodology used? Yes ☒ No ☐ N/A ☐

5.4 Was transcription checked? Yes ☒ No ☐ N/A ☐

5.5 Were all calculations checked at a minimum frequency? Yes ☒ No ☐ N/A ☐

5.6 Are worksheet entries complete and correct? Yes ☒ No ☐ N/A ☐

6.0 Comments on any No response:

NEM

17-08490

First Level Review

Pam Anderson

Date

8-16-06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number:

6207518
W04970

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Nonconformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response:

See NCM

Second Level Review

Sherryl A. Adams

Date: 8-17-06

Clouseau Nonconformance Memo

SEVERN
TRENT
SERVICES

NCM #: **10-08490**
NCM Initiated By: Pam Anderson
Date Opened: 08/16/2006
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Gamma by GER
Lot #'s (Sample #'s): J6G250322 (1),
QC Batches: 6207518

Nonconformance: MDA not met
Subcategory: Matrix effect

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	08/16/2006	Gamma sample H90221AE has a slightly elevated MDA (6.386pCi/L compared to 6.0 pCi/L). This is due to the high background caused by the Compton Scattering of the large amount of Co 60 found in the sample.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	08/16/2006	Note in case narrative.

Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
			<u>Response</u>		<u>Response Note</u>

Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
			This section not yet completed by QA.

Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
----------------------	--------------------	-----------------

8/8/2006 1:22:54 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AW Gamma PrpRC5017

TA Gamma by HPGE

Pipet #: _____

AnalyDueDate: 09/08/2006 *WD 4970*

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:







Batch: 6207518 WATER pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: RutherfordJ *[Signature]*

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst Init/Date	Comments:
1 H901Q-1-AD J6G250319-1-SAMP  07/25/2006 10:01	1980.40g,in				<i>100</i>	<i>100</i>	<i>G12</i>	<i>1752</i>	<i>8/9/0600</i>	
AmtRec: 20ML,5XLP,3X4LP #Containers: 9 Scr: Alpha: -3.10E-03 uCi/Sa Beta: 1.82E-03 uCi/Sa										
2 H901Q-1-AJ-X J6G250319-1-DUP  07/25/2006 10:01	1980.40g,in						<i>GB</i>	<i>1753</i>		
AmtRec: 20ML,5XLP,3X4LP #Containers: 9 Scr: Alpha: -3.10E-03 uCi/Sa Beta: 1.82E-03 uCi/Sa										
3 H9012-1-AD J6G250319-2-SAMP  07/25/2006 10:01	2002.50g,in						<i>G10</i>	<i>1753</i>		
AmtRec: 20ML,5XLP,3X4LP #Containers: 9 Scr: Alpha: 1.49E-04 uCi/Sa Beta: 1.22E-03 uCi/Sa										
4 H9022-1-AE J6G250322-1-SAMP  07/25/2006 09:15	1973.80g,in						<i>G11</i>	<i>1754</i>		
AmtRec: 20ML,125ML,250ML,2XLP #Containers: 5 Scr: Alpha: 1.57E-04 uCi/Sa Beta: -1.32E-04 uCi/Sa										
5 H93FA-1-AA-B J6G260000-518-BLK  07/25/2006 09:15	1999.70g,in						<i>G7</i>	<i>1754</i>		
AmtRec: #Containers: 1 Scr: Alpha: Beta:										
6 H93FA-1-AC-C J6G260000-518-LCS  07/25/2006 09:15	2002.60g,in		QCAG1270 07/20/06,pd 03/07/05,r				<i>G5</i>	<i>1755</i>		
AmtRec: #Containers: 1 Scr: Alpha: Beta:										

8/8/2006 1:22:56 PM

Sample Preparation/Analysis

Balance Id:1120482733

AW Gamma PrpRC5017

TA Gamma by HPGE

Pipet #: _____

AnalyDueDate: 09/08/2006

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 6207518

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: RutherfordJ

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	--------------	--------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments: H9022-SAMP "Comments: Insufficient volume for a full 2000 ml pour up on H9022. MD 8/8/06"

pH < 2.0 in 8/8/06

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, HC , 57671

H901Q1AD-SAMP Constituent List:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

H93FA1AA-BLK:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

H93FA1AC-LCS:

Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20						

H901Q1AD-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93FA1AA-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93FA1AC-LCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

8/15/2006 4:39:16 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/15/2005, 8/20/2006, Batch: '6207518', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6207518				
AC		CalcC	RutherfordJ 8/8/2006 12:41:05 PM	
SC		wagarr	IsBatched 7/26/2006 4:08:34 PM	ICOC_RADCALC v4.8.24
SC		RutherfordJ	InPrep 8/8/2006 12:41:05 PM	RICH-RC-5017 REVISION 5
SC		RutherfordJ	Prep1C 8/8/2006 1:48:30 PM	RICH-RC-5017 REVISION 5
SC		ScottM	Prep2C 8/9/2006 2:15:56 PM	RICH-RC-5017 REVISION 4
SC		DAWKINSO	Cnt1C 8/9/2006 2:29:08 PM	RICH-RD-0007 REVISION 5
SC		DAWKINSO	CalcC 8/9/2006 8:05:31 PM	RICH-RD-0007 REVISION 5
AC		RutherfordJ	8/8/2006 1:48:30 PM	
AC		ScottM	8/9/2006 2:15:56 PM	
AC		DAWKINSO	8/9/2006 2:29:08 PM	
AC		DAWKINSO	8/9/2006 8:05:31 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Lot No., Due Date: J6G250319,J6G250322; 09/08/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6207517; RBETA-SR Beta by GPC-Sr/Y
SDG, Matrix: W04970; WATER

8.0	Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01	The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02	Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03	Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04	The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05	Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06	At Least the Minimum Sample Volume Was Used Analysis Volume => H90221AD 12.70<200.00 Q:VB	Yes	No	N/A
8.07	The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08	The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09	Method Blank is within Control Limits. OK	Yes	No	N/A
8.1	Comments:			
8.11	Matrix Blank is within Control Limits. No Matrix Blanks (MBIs) found in Batch!	Yes	No	N/A
8.12	Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13	QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	Yes	No	N/A
8.14	LCS within Control Limits. OK	Yes	No	N/A
8.15	MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	Yes	No	N/A
8.16	MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	Yes	No	N/A
8.17	Tracer within Control Limits. OK	Yes	No	N/A
8.18	Samples are above Minimum Tracer Yield (No Failed Samples) OK	Yes	No	N/A
8.19	Sample Specific MDC <= CRDL. MDC/MDA > CRDL => H90221AD BETA 3.3E+01>4.0E+00 H90221AG BETA 3.2E+01>4.0E+00 Q:C1	Yes	No	N/A
8.2	Comments: <i>scm # 10.08489</i>			
8.21	Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22	Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => H901Q1AC BETA 1.1E+01 L:2.2E+00 H90121AC BETA 1.3E+01 L:2.0E+00 H90221AD BETA 1.1E+04 L:3.3E+01	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => BETA OK; No Callin Level Found => BETA	Yes	No	N/A
8.24	Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A

8.25	Counting Spectrum are within FWHM Limits. No FWHM found in Batch Data!	Yes	No	N/A
8.26	Instruments have Current Calibrations.	Yes	No	N/A
8.27	Correct Count Library Used. No Count Library found in Batch Data!	Yes	No	N/A
8.28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions.)	Yes	No	N/A
8.29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions.)	Yes	No	N/A
8.3	Comments:			
8.31	Results Blank Subtracted as Appropriate. OK	Yes	No	N/A

First Level Review

Pam Anderson

Date

8-16-09



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6207517
W04970

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	See 11/16/06	✓	
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Nonconformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: See 11/16/06

Second Level Review: Sherrell R Adam Date: 8-16-06

Clouseau Nonconformance Memo

SEVERN
TRENT
SERVICES

NCM #: **10-08489**
NCM Initiated By: Pam Anderson
Date Opened: 08/16/2006
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Beta by GPC-Sr/Y
Lot #'s (Sample #'s): J6G250322 (1),
QC Batches: 6207517

Nonconformance: MDA not met
Subcategory: Sample size reduced due to high residue mass

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	08/16/2006	Beta sample H9022 and it's duplicate do not meet CRDL due to high dissolved solids. The results of these two samples >MDA>CRDL.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	08/16/2006	None at this time.

Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
			<u>Response</u>		<u>Response Note</u>

Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
			This section not yet completed by QA.

Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
----------------------	--------------------	-----------------

8/8/2006 9:09:47 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National LabBC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: 229

AnalyDueDate: 09/08/2006 wo 4970

Sep1 DT/Tm Tech:

Batch: 6207517 WATER

pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: RutherfordJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H901Q-1-AC	201.30g,in									
J6G250319-1-SAMP										
07/25/2006 10:01		AmtRec: 20ML,5XLP,3X4LP	#Containers: 9					Scr: Alpha: -3.10E-03 uCi/Sa	Beta: 1.82E-03 uCi/Sa	
2 H9012-1-AC	198.00g,in									
J6G250319-2-SAMP										
07/25/2006 10:01		AmtRec: 20ML,5XLP,3X4LP	#Containers: 9					Scr: Alpha: 1.49E-04 uCi/Sa	Beta: 1.22E-03 uCi/Sa	
3 H9022-1-AD	12.70g,in									
J6G250322-1-SAMP										
07/25/2006 09:15		AmtRec: 20ML,125ML,250ML,2XLP	#Containers: 5					Scr: Alpha: 1.57E-04 uCi/Sa	Beta: -1.32E-04 uCi/Sa	
4 H9022-1-AG-X	12.70g,in									
J6G250322-1-DUP										
07/25/2006 09:15		AmtRec: 20ML,125ML,250ML,2XLP	#Containers: 5					Scr: Alpha: 1.57E-04 uCi/Sa	Beta: -1.32E-04 uCi/Sa	
5 H93E6-1-AA-B	202.80g,in									
J6G260000-517-BLK										
07/25/2006 09:15		AmtRec:	#Containers: 1					Scr: Alpha:	Beta:	
6 H93E6-1-AC-C	200.30g,in									
J6G260000-517-LCS										
07/25/2006 09:15		AmtRec:	#Containers: 1					Scr: Alpha:	Beta:	

8/8/2006 9:09:48 AM

Sample Preparation/Analysis

Balance Id:1120482733

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/08/2006

Sep1 DT/Tm Tech:

Batch: 6207517

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,RutherfordJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
-------------------------------------	-------------------	-----------------------------	------------------------	--------------	--------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments: H901Q-SAMP "Comments: Aliquots reduced for H901Q due to weight screen activity. MD 8/8/06"
H9012-SAMP "Comments: Aliquots reduced for H9012 due to weight screen activity. MD 8/8/06"
H9022-SAMP "Comments: Aliquots reduced for H9022 due to weight screen activity. MD 8/8/06"

pH < 2.0 8/8/06

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, HC , 57671

H901Q1AC-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
H93E61AA-BLK:					
BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
H93E61AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

H901Q1AC-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H93E61AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H93E61AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By _____

Date: _____

8/15/2006 4:32:07 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/15/2005, 8/20/2006, Batch: '6207517', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting		Comments
6207517					
AC	InCnt1	RutherfordJ	8/8/2006 8:57:10 AM		
SC		wagarr	IsBatched	7/26/2006 4:08:34 PM	ICOC_RADCALC v4.8.24
SC		RutherfordJ	Prep1C	8/8/2006 8:57:10 AM	RICH-RC-5014 REVISION 6
SC		RutherfordJ	Prep1C	8/8/2006 10:26:00 AM	RICH-RC-5014 REVISION 6
SC		ScottM	InPrep2	8/11/2006 9:47:16 AM	RICH-RC-5014 REVISION 6
SC		ScottM	Prep2C	8/15/2006 7:49:27 AM	RICH-RC-5014 REVISION 6
SC		BlackCL	InCnt1	8/15/2006 7:54:15 AM	RICH-RD-0003 REVISION 4
AC		RutherfordJ	8/8/2006 10:26:00		
AC		ScottM	8/11/2006 9:47:16		
AC		ScottM	8/14/2006 1:43:39 PM		
AC		ScottM	8/15/2006 7:49:27		
AC		BlackCL	8/15/2006 7:54:15		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Lot No., Due Date: J6G250319; 09/08/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6207512; RUIISO Uiso by ALP
SDG, Matrix: W04970; WATER

8.0 Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02 Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03 Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06 At Least the Minimum Sample Volume Was Used OK	Yes	No	N/A
8.07 The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09 Method Blank is within Control Limits. OK	Yes	No	N/A
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBIs) found in Batch!	Yes	No	N/A
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13 QAS Specified Duplicate Equation Value within Control Limits. RPD > UCL : 20.0=> H901Q1AH U-234 44.0 H901Q1AH U-235 200.0 H901Q1AH U-238 200.0 (RPD)	Yes	No	N/A
8.14 LCS within Control Limits. LCS Exceeds Control Limit => H93EX1AC U-235 134 L:70 130 H93EX1AC U-235 134 L:70 130 Q:S0	Yes	No	N/A
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	Yes	No	N/A
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	Yes	No	N/A
8.17 Tracer within Control Limits. OK	Yes	No	N/A
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	Yes	No	N/A
8.19 Sample Specific MDC <= CRDL. OK	Yes	No	N/A
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22 Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK	Yes	No	N/A
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => U-234 U-235 U-238 OK; No Callin Level Found => U-234 U-235	Yes	No	N/A

U-238

8.24 Result + 3s >=0, Not Too Negative.

Yes No N/A

OK

☒ ☐ ☐

8.25 Counting Spectrum are within FWHM Limits.

Yes No N/A

FWHM > maxFWHM => H93EX1AC U-234 57.3>0 Q:V1

☒ ☐ ☐

8.26 Instruments have Current Calibrations.

Yes No N/A

8.27 Correct Count Library Used.

Yes No N/A

Library Not Specified => H901Q1AG I:[NUC_LIBR]AR_U. Q:

H901Q1AH I:[NUC_LIBR]AR_U. Q:

H90121AG I:[NUC_LIBR]AR_U. Q:

H93EX1AA I:[NUC_LIBR]AR_U. Q:

H93EX1AC I:[NUC_LIBR]AR_U. Q:

8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions.)

Yes No N/A

8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions.)

Yes No N/A

8.3 Comments:

8.31 Results Blank Subtracted as Appropriate.

Yes No N/A

OK

☒ ☐ ☐

First Level Review Pam Anderson

Date 8-18-06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6207512
W04970

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			✓
1. Are all Nonconformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review

Sheryl A. Adams

Date:

8-21-06

8/4/2006 11:11:08 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

7Y Uiso PrpRC5016/5086, SepRC5067(5039)

Pipet #: _____

AnalyDueDate: 09/08/2006

NO 4970

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 6207512 WATER






pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech: gmf 8-16-06

SEQ Batch, Test: None

Prep Tech: ,RutherfordJ

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H901Q-1-AG J6G250319-1-SAMP  07/25/2006 10:01			198.80g,in	198.80g	UITC16122 08/03/06,pd 07/28/06,r	200				
AmtRec: 20ML,5XLP,3X4LP #Containers: 9 Scr: Alpha: -3.10E-03 uCi/Sa Beta: 1.82E-03 uCi/Sa										
2 H901Q-1-AH-X J6G250319-1-DUP  07/25/2006 10:01			199.30g,in	199.30g	UITC16123 08/03/06,pd 07/28/06,r					
AmtRec: 20ML,5XLP,3X4LP #Containers: 9 Scr: Alpha: -3.10E-03 uCi/Sa Beta: 1.82E-03 uCi/Sa										
3 H9012-1-AG J6G250319-2-SAMP  07/25/2006 10:01			203.90g,in	203.90g	UITC16124 08/03/06,pd 07/28/06,r					
AmtRec: 20ML,5XLP,3X4LP #Containers: 9 Scr: Alpha: 1.49E-04 uCi/Sa Beta: 1.22E-03 uCi/Sa										
4 H93EX-1-AA-B J6G260000-512-BLK  07/25/2006 10:01			203.30g,in	203.30g	UITC16125 08/03/06,pd 07/28/06,r					
AmtRec: #Containers: 1 Scr: Alpha: Beta:										
5 H93EX-1-AC-C J6G260000-512-LCS  07/25/2006 10:01			200.10g,in	200.10g	UISG1351 06/01/06,pd 01/20/04,r					
AmtRec: #Containers: 1 Scr: Alpha: Beta:										

Comments:

pH < 2.0 mg 8/4/06

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, HC , 57671

H901Q1AG-SAMP Constituent List:

U-232

RDL:

pCi/L

LCL:20

UCL:105

RPD:20

U-234

RDL:1.00E+00

pCi/L

LCL:

UCL:

RPD:

STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2
Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 5
Prep_SamplePrep v4.8.24

8/4/2006 11:11:11 AM

Sample Preparation/Analysis

Balance Id:1120482733

7Y Uiso PrpRC5016/5086, SepRC5067(5039)

Pipet #: _____

SR Uranium-234,235,238 by Alpha Spec

AnalyDueDate: 09/08/2006

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 6207512

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,RutherfordJ

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:	
U-235	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
H93EX1AA-BLK:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	U-234	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
U-235	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
H93EX1AC-LCS:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Uranium	RDL:	pCi/L	LCL:70	UCL:130	RPD:20
H901Q1AG-SAMP Calc Info:											
Uncert Level (#s):: 2		Decay to SaDt: Y		Blk Subt.: N		Sci.Not.: Y		ODRs: B			
H93EX1AA-BLK:											
Uncert Level (#s):: 2		Decay to SaDt: Y		Blk Subt.: N		Sci.Not.: Y		ODRs: B			
H93EX1AC-LCS:											
Uncert Level (#s):: 2		Decay to SaDt: Y		Blk Subt.: N		Sci.Not.: Y		ODRs: B			

Approved By _____ Date: _____

8/18/2006 3:23:08 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/18/2005, 8/23/2006, Batch: '6207512', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting		Comments
6207512					
AC	CalcC	RutherfordJ	8/4/2006 10:58:25		
SC		wagarr	IsBatched	7/26/2006 4:08:34 PM	ICOC_RADCALC v4.8.24
SC		RutherfordJ	InPrep	8/4/2006 10:58:25 AM	RICH-RC-5016 REVISION 6
SC		FABREM	Sep2C	8/16/2006 2:46:40 PM	RICH-RC-5039 REV 6
SC		DAWKINSO	InCnt1	8/16/2006 3:40:03 PM	RICH-RD-0008 REVISION 4
SC		DAWKINSO	InCnt1	8/17/2006 1:58:50 PM	RICH-RD-0008 REVISION 4
SC		DAWKINSO	CalcC	8/17/2006 2:41:09 PM	RICH-RD-0008 REVISION 4
AC		FABREM	8/16/2006 2:46:40 PM		
AC		DAWKINSO	8/16/2006 3:40:03 PM		
AC		DAWKINSO	8/17/2006 1:58:50 PM		
AC		DAWKINSO	8/17/2006 2:41:09 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Lot No., Due Date: J6G250319,J6G250322; 09/08/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6207513; RALPHA-A Alpha by GPC-Am
SDG, Matrix: W04970; WATER

8.0 Correction Calculation Protocol Used. OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.02 Final Results Are in the Appropriate Activity Units OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.03 Batch Contains the Required QC Appropriate for the Method OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.06 At Least the Minimum Sample Volume Was Used Analysis Volume => H901Q1AA 109.00<200.00 H90121AA 56.20<200.00 H90221AC 11.50<200.00 Q:VB	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
8.07 The Correct Count Geometry was Used. OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.09 Method Blank is within Control Limits. OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBIs) found in Batch!	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.13 QAS Specified Duplicate Equation Value within Control Limits. RPD > UCL : 20.0=> H90121AH ALPHA 250.0 (RPD)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
8.14 LCS within Control Limits. OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
8.17 Tracer within Control Limits. OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.19 Sample Specific MDC <= CRDL. MDC/MDA > CRDL => H90221AC ALPHA 1.5E+01>3.0E+00 Q:C1	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
8.22 Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => ALPHA OK; No Callin Level Found => ALPHA	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
8.24 Result + 3s >=0, Not Too Negative. OK	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

ncm 10-08512

8.25 Counting Spectrum are within FWHM Limits. No FWHM found in Batch Data!	Yes	No	N/A <input checked="" type="checkbox"/>
8.26 Instruments have Current Calibrations.	Yes	No	N/A
8.27 Correct Count Library Used. No Count Library found in Batch Data!	Yes	No	N/A <input checked="" type="checkbox"/>
8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A
8.3 Comments:			
8.31 Results Blank Subtracted as Appropriate. OK	Yes <input checked="" type="checkbox"/>	No	N/A

First Level Review

Pam Anderson

Date

8-18-06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6207513
W04970

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis		✓	
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Nonconformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response:

See NCM

Second Level Review:

Sheryl A. Adams

Date: 8-18-06

Clouseau Nonconformance Memo

NCM #: **10-08512**

NCM Initiated By: Pam Anderson

Date Opened: 08/18/2006

Date Closed:

Classification: **Anomaly**

Status: **GLREVIEW**

Production Area: Environmental - Sep

Tests: Alpha by GPC-Am

Lot #'s (Sample #'s): J6G250322 (1),

QC Batches: 6207513

Nonconformance: MDA not met

Subcategory: Sample size reduced due to high residue mass

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	08/18/2006	Sample H90221AC for alpha does not meet CRDL due to high dissolved solids in the sample.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	08/18/2006	Report with the MDA achieved.

Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
			<u>Response</u>		<u>Response Note</u>

Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
			This section not yet completed by QA.

Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
----------------------	--------------------	-----------------

8/8/2006 9:09:45 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National LabAZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: 229

AnalyDueDate: 09/08/2006 w04970

Sep1 DT/Tm Tech:







Batch: 6207513 WATER pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: RutherfordJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H901Q-1-AA J6G250319-1-SAMP 07/25/2006 10:01	109.00g,in									
										
1.5 37.2 200 100 1326 8/10/06										
AmtRec: 20ML,5XLP,3X4LP			#Containers: 9		Scr:		Alpha: -3.10E-03 uCi/Sa		Beta: 1.82E-03 uCi/Sa	
2 H9012-1-AA J6G250319-2-SAMP 07/25/2006 10:01	56.20g,in									
										
18.6 10E										
AmtRec: 20ML,5XLP,3X4LP			#Containers: 9		Scr:		Alpha: 1.49E-04 uCi/Sa		Beta: 1.22E-03 uCi/Sa	
3 H9012-1-AH-X J6G250319-2-DUP 07/25/2006 10:01	56.10g,in									
										
17.5 10A 1705 8/10/06										
AmtRec: 20ML,5XLP,3X4LP			#Containers: 9		Scr:		Alpha: 1.49E-04 uCi/Sa		Beta: 1.22E-03 uCi/Sa	
4 H9022-1-AC J6G250322-1-SAMP 07/25/2006 09:15	11.50g,in									
										
56.0 8/15/06 10B										
AmtRec: 20ML,125ML,250ML,2XLP			#Containers: 5		Scr:		Alpha: 1.57E-04 uCi/Sa		Beta: -1.32E-04 uCi/Sa	
5 H93E3-1-AA-B J6G260000-513-BLK 07/25/2006 10:01	200.30g,in									
										
0.2 10C										
AmtRec:			#Containers: 1		Scr:		Alpha:		Beta:	
6 H93E3-1-AC-C J6G260000-513-LCS 07/25/2006 10:01	200.30g,in									
										
0.4 10d										
AmtRec:			#Containers: 1		Scr:		Alpha:		Beta:	

8/8/2006 9:09:47 AM

Sample Preparation/Analysis

Balance Id:1120482733

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/08/2006

Sep1 DT/Tm Tech:

Batch: 6207513

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,RutherfordJ

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	--------------	--------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments: H901Q-SAMP "Comments: Aliquots reduced for H901Q due to weight screen activity. MD 8/8/06"
H9012-SAMP "Comments: Aliquots reduced for H9012 due to weight screen activity. MD 8/8/06"
H9022-SAMP "Comments: Aliquots reduced for H9022 due to weight screen activity. MD 8/8/06"

pH < 2.0 in 8/8/06

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, HC , 57671

H901Q1AA-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
H93E31AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
H93E31AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

H901Q1AA-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H93E31AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H93E31AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By _____ Date: _____

8/17/2006 5:13:22 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/17/2005, 8/22/2006, Batch: '6207513', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6207513				
AC	CalcC	RutherfordJ	8/8/2006 8:57:01 AM	
SC		wagarr	IsBatched 7/26/2006 4:08:34 PM	ICOC_RADCALC v4.8.24
SC		RutherfordJ	Prep1C 8/8/2006 8:57:01 AM	RICH-RC-5014 REVISION 6
SC		RutherfordJ	Prep1C 8/8/2006 10:25:50 AM	RICH-RC-5014 REVISION 6
SC		ScottM	InPrep2 8/11/2006 9:47:11 AM	RICH-RC-5014 REVISION 6
SC		ScottM	Prep2C 8/15/2006 7:49:35 AM	RICH-RC-5014 REVISION 6
SC		BlackCL	InCnt1 8/15/2006 7:54:10 AM	RICH-RD-0003 REVISION 4
SC		DAWKINSO	CalcC 8/16/2006 9:40:13 PM	RICH-RD-0003 REVISION 4
AC		RutherfordJ	8/8/2006 8:57:32 AM	
AC		RutherfordJ	8/8/2006 10:25:50	
AC		ScottM	8/11/2006 9:47:11	
AC		ScottM	8/14/2006 1:43:30 PM	
AC		ScottM	8/15/2006 7:49:35	
AC		BlackCL	8/15/2006 7:54:10	
AC		DAWKINSO	8/16/2006 9:40:13 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Lot No., Due Date: J6G250319,J6G220144,J6G240196,J6G240197; 09/08/2006

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6207520; RGAMLEPS Gamma by LEPS

SDG, Matrix: W04970; WATER

1.0 COC

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted? Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

5.3 Was the correct methodology used? Yes No N/A

5.4 Was transcription checked? Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

6.0 Comments on any No response:

First Level Review

Pam. Anderson

Date

8-31-06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6207520

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Nonconformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Sheryl A. Allen Date: 8-31-06

8/14/2006 3:27:54 PM

Sample Preparation/Analysis

Balance Id:2113224201

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National LabBN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/04/2006

W04970

Sep1 DT/Tm Tech:

Batch: 6207520 WATER

pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: NortonJ

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H9TN2-1-AC J6G220144-2-SAMP 07/21/2006 10:29	3907.60g,in	ITA5534 06/29/06				100	L2	1308		
32.7										
AmtRec: 20ML,3XLP #Containers: 4 Scr: Alpha: 2.43E-03 uCi/Sa Beta: -1.64E-03 uCi/Sa										
2 H9TN2-1-AD-X J6G220144-2-DUP 07/21/2006 10:29	3926.40g,in	ITA5535 06/29/06				100	L4	1308		
32.0										
AmtRec: 20ML,3XLP #Containers: 4 Scr: Alpha: 2.43E-03 uCi/Sa Beta: -1.64E-03 uCi/Sa										
3 H9TPA-1-AC J6G220144-3-SAMP 07/21/2006 12:11	3913.70g,in	ITA5536 06/29/06				100	L5	1309		
31.2										
AmtRec: 20ML,3XLP #Containers: 4 Scr: Alpha: -4.27E-04 uCi/Sa Beta: 2.84E-04 uCi/Sa										
4 H9TPK-1-AC J6G220144-4-SAMP 07/21/2006 09:20	3893.50g,in	ITA5537 06/29/06				100	L2	1452		
31.0										
AmtRec: 20ML,2X500MLP,LP,2X4LP #Containers: 6 Scr: Alpha: -2.36E-03 uCi/Sa Beta: 7.92E-04 uCi/Sa										
5 H9TP0-1-AC J6G220144-5-SAMP 07/21/2006 07:45	3915.90g,in	ITA5538 06/29/06				100	L4	1452		
32.7										
AmtRec: 20ML,2X500MLP,LP,2X4LP #Containers: 6 Scr: Alpha: -8.56E-05 uCi/Sa Beta: 4.35E-04 uCi/Sa										
6 H9WW0-1-AC J6G240196-1-SAMP 07/24/2006 10:59	3922.10g,in	ITA5539 06/29/06				100	L5	1453		
32.8										
AmtRec: 20ML,500ML,4XLP,2X4LP #Containers: 8 Scr: Alpha: 1.90E-03 uCi/Sa Beta: -1.49E-04 uCi/Sa										
7 H9WW5-1-AC J6G240197-1-SAMP 07/24/2006 11:46	3947.20g,in	ITA5540 06/29/06				100	L2	1636		
32.7										
AmtRec: 20ML,2X500ML,LP,2X4LP #Containers: 6 Scr: Alpha: -1.11E-03 uCi/Sa Beta: 2.75E-03 uCi/Sa										

8/14/2006 3:27:55 PM

Sample Preparation/Analysis

Balance Id:2113224201

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National LabBN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/04/2006

Sep1 DT/Tm Tech:

Batch: 6207520 WATER





pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: RutherfordJ,NortonJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 H901Q-1-AE J6G250319-1-SAMP 	3918.90g,in		ITA5541 06/29/06			100				
07/25/2006 10:01		AmtRec: 20ML,5XLP,3X4LP	#Containers: 9							
9 H9012-1-AE J6G250319-2-SAMP 	3918.30g,in		ITA5542 06/29/06			100				
07/25/2006 10:01		AmtRec: 20ML,5XLP,3X4LP	#Containers: 9							
10H93FK-1-AA-B J6G260000-520-BLK 	3905.20g,in		ITA5543 06/29/06			100				
07/21/2006 10:29		AmtRec:	#Containers: 1							
11H93FK-1-AC-C J6G260000-520-LCS 	3917.80g,in		ISD0677 08/02/06			100				
07/21/2006 10:29		AmtRec:	#Containers: 1							

Comments:

SAMPLES PK APPX 7
SAMPLES COOKED TO DRYNESS AT STEP 11.3 OR RC5025 per 8-15-6

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, HC , 57671

H9TN21AC-SAMP Constituent List:

I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
H93FK1AA-BLK:					
I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
H93FK1AC-LCS:					
I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

H9TN21AC-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2

ISV - Insufficient Volume for Analysis

Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Cnt: 11

Prep_SamplePrep v4.8.24

8/14/2006 3:27:56 PM

Sample Preparation/Analysis

Balance Id:2113224201

BN I-129 Prp/SepRC5025

TB Gamma by LEPD

5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/04/2006

Sep1 DT/Tm Tech: _____


Batch: 6207520

pCi/L

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: ,NortonJ

										Prep Tech: ,NortonJ	
Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:	

H93FK1AA-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

H93FK1AC-LCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

8/31/2006 7:09:00 AM

ICOC Fraction Transfer/Status Report

ByDate: 8/31/2005, 9/5/2006, Batch: '6207520', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6207520				
AC	CalcC	NortonJ	8/14/2006 2:25:05 PM	
SC		wagarr	IsBatched 7/26/2006 4:08:34 PM	ICOC_RADCALC v4.8.24
SC		NortonJ	InPrep 8/14/2006 2:25:05 PM	RICHRC5025 REV3
SC		NortonJ	InSep1 8/14/2006 3:26:40 PM	richrc5025 rev3
SC		HoganS	Prep1C 8/30/2006 10:35:18 AM	RICH-RC-5025 REVISION 3
SC		BlackCL	InCnt1 8/30/2006 11:26:51 AM	RICH-RD-0007 REVISION 5
SC		DAWKINSO	CalcC 8/30/2006 9:46:28 PM	RICH-RD-0007 REVISION 5
AC		NortonJ	8/14/2006 3:26:40 PM	
AC		HoganS	8/30/2006 10:35:18	
AC		BlackCL	8/30/2006 11:26:51	
AC		DAWKINSO	8/30/2006 9:46:28 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

9/20/2006 1:12:00 PM

ICOC Fraction Transfer/Status Report

ByDate: 9/20/2005, 9/25/2006, Batch: '6207520', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6207520				
AC	IsRpt	NortonJ	8/14/2006 2:25:05 PM	
SC		wagarr	IsBatched 7/26/2006 4:08:34 PM	ICOC_RADCALC v4.8.24
SC		NortonJ	InPrep 8/14/2006 2:25:05 PM	RICHRC5025 REV3
SC		NortonJ	InSep1 8/14/2006 3:26:40 PM	richrc5025 rev3
SC		HoganS	Prep1C 8/30/2006 10:35:18 AM	RICH-RC-5025 REVISION 3
SC		BlackCL	InCnt1 8/30/2006 11:26:51 AM	RICH-RD-0007 REVISION 5
SC		DAWKINSO	CalcC 8/30/2006 9:46:28 PM	RICH-RD-0007 REVISION 5
SC		AndersonP	Rev1C 8/31/2006 7:52:29 AM	RICH-RC-0002 REVISION 7
SC		ICOC	IsRpt 9/9/2006 4:33:00 AM	ICOC_RADCALC v4.8.17
AC		NortonJ	8/14/2006 3:26:40 PM	
AC		HoganS	8/30/2006 10:35:18	
AC		BlackCL	8/30/2006 11:26:51	
AC		DAWKINSO	8/30/2006 9:46:28 PM	
AC		AndersonP	8/31/2006 7:52:29	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Lot No., Due Date: J6G240196; 09/08/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6207525; RSR85907 Sr-85/90 by GPC-7
SDG, Matrix: W04970; WATER

8.0	Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01	The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02	Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03	Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04	The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05	Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06	At Least the Minimum Sample Volume Was Used OK	Yes	No	N/A
8.07	The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08	The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09	Method Blank is within Control Limits. OK	Yes	No	N/A
8.1	Comments:			
8.11	Matrix Blank is within Control Limits. No Matrix Blanks (MBIks) found in Batch!	Yes	No	N/A
8.12	Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13	QAS Specified Duplicate Equation Value within Control Limits. RPD > UCL : 20.0=> H9WW01AF SR-90 36.0 H9WW01AF SR-90 400.0 H9WW01AF SR-90 140.0 (RPD)	Yes	No	N/A
8.14	LCS within Control Limits. OK	Yes	No	N/A
8.15	MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	Yes	No	N/A
8.16	MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	Yes	No	N/A
8.17	Tracer within Control Limits. OK	Yes	No	N/A
8.18	Samples are above Minimum Tracer Yield (No Failed Samples) OK	Yes	No	N/A
8.19	Sample Specific MDC <= CRDL. OK	Yes	No	N/A
8.2	Comments:			
8.21	Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22	Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => SR-90 OK; No Callin Level Found => SR-90	Yes	No	N/A
8.24	Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A

8.25	Counting Spectrum are within FWHM Limits. No FWHM found in Batch Data!	Yes	No	N/A	<input checked="" type="checkbox"/>
8.26	Instruments have Current Calibrations.	Yes	No	N/A	
8.27	Correct Count Library Used. No Count Library found in Batch Data!	Yes	No	N/A	<input checked="" type="checkbox"/>
8.28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A	
8.29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A	
8.3	Comments:				
8.31	Results Blank Subtracted as Appropriate. OK	Yes	No	N/A	<input checked="" type="checkbox"/>

First Level Review Pam Anderson Date 9-7-06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number:

6207525
W04970

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Nonconformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response:

Second Level Review:

Sheryl A. Adam

Date:

9-7-06

Data Verification Log (Qualifiers)

Batch Verification Log Order by Qualifier Type, Work Order, Parameter



Work Order No.	Parameter Code	Verification Item	LCL	UCL	Associated Value	Text Limit	Limit Units	Qualifier	Discription	Validation Text
vFCL										
8.13 H9WW01AF	SR-90	DupCheck		20.0	36.0		%	P2	Duplicates outside of control limits RPD equation.	RPD > UCL : 20.0=> H9WW01AF SR-90 36.0, H9WW01AF SR-90 400.0, H9WW01AF SR-90 140.0 (RPD)
vND										
8.22 H9WW01AD	SR-90	ResultLTLCMdcAc		0.43	0.38		pCi/L	U5	Result <= MDC, where MDC = 4.65 * sqrt(BlkBkg) + -3.	No Positive Results, OK

8/10/2006 7:44:37 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National LabCL Sr-90 Prp/SepRC5006(5071)
TL Sr-85 by Nal and Sr-90 by GPC 7 day ingrowth
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 09/07/2006 *WO 4970*Sep1 DT/Tm Tech: *8-26-06 3:31 PM*





Batch: 6207525 WATER pCi/L

PM, Quote: HC , 57671

Sep2 DT/Tm Tech: *06 Sep 06 11:00 AM*

SEQ Batch, Test: None

Prep Tech: ,RutherfordJ *DRM*

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H9WW0-1-AD J6G240196-1-SAMP  YTA16113 Ex:7/23/2007	1000.60g,in	SRTB13925 08/03/06,pd 06/21/06,r	<i>1.767 -</i> <i>2.0241 - 1.5"</i> <i>0.873 -</i>	<i>85.6</i>	<i>100</i>			<i>9"</i>	<i>1820</i>	<i>8/28/06 DR</i>	
07/24/2006 10:59	AmtRec: 20ML,500ML,4XLP,2X4LP	#Containers: 8	Scr:	Alpha: 1.90E-03 uCi/Sa	Beta: -1.49E-04 uCi/Sa						
2 H9WW0-1-AF-X J6G240196-1-DUP  YTA16114 Ex:7/23/2007	999.80g,in	SRTB13926 08/03/06,pd 06/21/06,r	<i>1.918 -</i> <i>2.0307 -</i> <i>0.9292 -</i>	<i>25.4</i>				<i>3"</i>	<i>1820</i>	<i>8/28/06 DR</i>	
07/24/2006 10:59	AmtRec: 20ML,500ML,4XLP,2X4LP	#Containers: 8	Scr:	Alpha: 1.90E-03 uCi/Sa	Beta: -1.49E-04 uCi/Sa						
3 H93F3-1-AA-B J6G260000-525-BLK  YTA16115 Ex:7/23/2007	999.90g,in	SRTB13927 08/03/06,pd 06/21/06,r	<i>1.689 -</i> <i>2.0524 -</i> <i>0.8351 -</i>	<i>24.7</i>				<i>9"</i>	<i>1856</i>	<i>8/28/06 DR</i>	
07/24/2006 10:59	AmtRec:	#Containers: 1	Scr:	Alpha:	Beta:						
4 H93F3-1-AC-C J6G260000-525-LCS  YTA16116 Ex:7/23/2007	1000.30g,in	SRSB1251 07/27/06,pd 06/21/06,r	<i>1.811 -</i> <i>1.9945 -</i> <i>0.9076</i>	<i>25.2</i>				<i>3"</i>	<i>1856</i>	<i>8/28/06 DR</i>	
07/24/2006 10:59	AmtRec:	#Containers: 1	Scr:	Alpha:	Beta:						

8/10/2006 7:44:39 AM

Sample Preparation/Analysis

Balance Id:1120482733

CL Sr-90 Prp/SepRC5006(5071)

Pipet #: _____

TL Sr-85 by Nal and Sr-90 by GPC 7 day ingrowth

AnalyDueDate: 09/07/2006

5I CLIENT: HANFORD

Sep1 DT/Tm Tech: _____

Batch: 6207525

pCi/L

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: ,RutherfordJ

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	-----------------	--------------	--------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments: *PA<2.0 mB 8/10/06*

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, HC , 57671

H9WW01AD-SAMP Constituent List:

Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
H93F31AA-BLK:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:
H93F31AC-LCS:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

H9WW01AD-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H93F31AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H93F31AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By _____ Date: _____

9/7/2006 10:21:50 AM

ICOC Fraction Transfer/Status Report

ByDate: 9/7/2005, 9/12/2006, Batch: '6207525', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6207525				
AC	CalcC	RutherfordJ	8/10/2006 7:02:44	
SC		wagarr	IsBatched	7/26/2006 4:08:34 PM
SC		RutherfordJ	InPrep	8/10/2006 7:02:44 AM
SC		RutherfordJ	Prep1C	8/10/2006 7:46:21 AM
SC		ManisD	Sep1C	8/28/2006 5:17:28 PM
SC		DAWKINSO	InCnt1	8/28/2006 5:50:52 PM
SC		DAWKINSO	Cnt1C	8/28/2006 9:52:27 PM
SC		ManisD	Sep2C	9/5/2006 4:37:38 PM
SC		DAWKINSO	InCnt2	9/5/2006 4:47:33 PM
SC		BlackCL	CalcC	9/7/2006 8:24:31 AM
AC		RutherfordJ	8/10/2006 7:46:21	
AC		ManisD	8/28/2006 5:17:28 PM	
AC		DAWKINSO	8/28/2006 5:50:52 PM	
AC		DAWKINSO	8/28/2006 9:52:27 PM	
AC		ManisD	9/5/2006 4:37:38 PM	
AC		DAWKINSO	9/5/2006 4:47:33 PM	
AC		BlackCL	9/7/2006 8:24:31 AM	

AC: Accepting Entry; SC: Status Change

STL Richland
Richland Wa.

PNNL <i>J66220144</i> <i>W04970</i> <i>Due 9-14-06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # <div style="border: 1px solid black; padding: 5px; text-align: center; font-weight: bold;">A06-007-15</div>	
				Page <u>1</u> of <u>1</u>	
Collector <i>DURATEK</i> <i>L. D. WALL</i>		Contact/Requester <i>Dot Stewart</i>		Telephone No. <i>509-376-5056</i> MSIN <i>FAX</i>	
SAF No. <i>A06-007</i>		Sampling Origin <i>Hanford Site</i>		Purchase Order/Charge Code	
Project Title <i>LLWMA(4)-PA, JULY 2006</i>		<i>OTS-54W-14109</i>		Ice Chest No. <i>GRP03-004</i> Temp.	
Shipped To (Lab) <i>Severn Trent Incorporated, Richland</i>		Method of Shipment <i>Govt. Vehicle</i>		Bill of Lading/Air Bill No.	
Protocol <i>Other</i>		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JK35		W	<i>2-21-06</i>	<i>1211</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JK35		W	↓	↓	1x20-mL P	Activity Scan <i>H9TNT-8W</i>	None
B1JK35		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) <i>H9TPA</i>	None

Relinquished By <i>DURATEK</i> <i>L. D. WALL</i>	Print <i>L.D. Wall</i> Sign	Date/Time <i>14:00</i> <i>JUL 21 2006</i>	Received By <i>S. Welch</i>	Print <i>S. Welch</i> Sign	Date/Time <i>14:00</i> <i>JUL 21 2006</i>	Matrix * S = Soil DS = Drum Solid SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By	Date/Time

PNNL 66220144 W04970 <i>Due 9-4-06</i>		<h2 style="margin:0;">CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</h2>		C.O.C. # <h3 style="margin:0;">A06-007-17</h3>	
				Page 1 of 1	
Collector DURATEK L. D. WALL		Contact/Requester Dot Stewart		Telephone No. MSIN FAX 509-376-5056	
SAF No. A06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title LLWMA(4)-PA, JULY 2006		<i>QTS SAMS H109</i>		Ice Chest No. Temp. <i>GRP 03-04</i>	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol Other		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JK36		W	<i>7-21-06</i>	<i>1029</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JK36		W	↓	↓	1x20-mL P	Activity Scan	None
B1JK36		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None

Relinquished By DURATEK L. D. WALL	Print Sign <i>L. D. Wall</i>	Date/Time <i>14:00</i> JUL 21 2006	Received By S. Welch S. Welch	Print Sign <i>S. Welch</i>	Date/Time <i>14:00</i> JUL 21 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By	Date/Time

PNNL 066220144 W04970 Due 9-4-06		<h2 style="margin:0;">CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</h2>		C.O.C. # <h3 style="margin:0;">A06-007-19</h3>	
		Page 1 of 1			
Collector DURATEK L.D. WALL		Contact/Requester Dot Stewart		Telephone No. 509-376-5056 MSIN FAX	
SAF No. A06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title LLWMA(4)-PA, JULY 2006		Ice Chest No. DTS-SAMS H 109		Temp. GRP03-004	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol Other		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JK37		W	7-21-06	0920	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JK37		W			1x20-mL P	Activity Scan	None
B1JK37		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JK37		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JK37		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By DURATEK L.D. WALL	Print Sign 	Date/Time JUL 21 2006 14:00	Received By Print Sign 	Date/Time JUL 21 2006 14:00	Matrix *		
Relinquished By		Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other		
Relinquished By		Date/Time	Received By	Date/Time			
Relinquished By		Date/Time	Received By	Date/Time			
Relinquished By		Date/Time	Received By	Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By	Date/Time

PNNL J66220144 DURATEK L. D. WALL		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST W04970 Due 9-4-06		C.O.C. # A06-007-20 Page 1 of 1	
Collector L. D. WALL		Contact/Requester Dot Stewart		Telephone No. 509-376-5056 MSIN FAX	
SAF No. A06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title LI WMA(4)-PA, JULY 2006		Ice Chest No. DRS- SAMS 14 109		Temp. GRP 03-004	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol Other		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JK38		W	7/21/06	0745	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JK38		W			1x20-mL P	Activity Scan	None
B1JK38		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JK38		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JK38		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By: DURATEK L. D. WALL Sign: [Signature] Date/Time: 7/21/2006 14:00		Received By: S. Welch Print: S. Welch Date/Time: 7/21/2006 14:00		Matrix * S = Soil DS = Drum Solid SF = Sediment DI. = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L. = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By: _____ Date/Time: _____		Received By: _____ Date/Time: _____			
Relinquished By: _____ Date/Time: _____		Received By: _____ Date/Time: _____			
Relinquished By: _____ Date/Time: _____		Received By: _____ Date/Time: _____			
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time			



STL

Sample Check-in List

Date/Time Received: 7-21-06 14:00

Client: PGW SDG #: W04970 NA ☐ SAF #: A06-007 NA ☐

Work Order Number: 166220144

Chain of Custody # A06-007-15, 17, 19, 2

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☐ No ☒
4. Cooler temperature: _____ NA ☐ 5. Vermiculite/packing materials is NA ☐ Wet ☐ Dry ☒
6. Number of samples in shipping container: 4
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
____ adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☒
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☒ No ☐
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: L. Wilek

Date: 7-21-06 14:00

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL J66240170 W04970 <i>Due 9.7.06</i>		<h2 style="margin:0;">CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</h2>		C.O.C. # <h3 style="margin:0;">S06-006-80</h3>	
				Page <u>1</u> of <u>1</u>	
Collector BURATEK K.J. YOUNG		Contact/Requester Dot Stewart		Telephone No. 509-376-5056 MSIN FAX	
SAF No. S06-006		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title SURV. JUNE 2006		<i>DIS-SAWS-H104</i>		Ice Chest No. <i>3ML-442</i> Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1J8L9		W	<i>7-24-06</i>	<i>122</i>	1x20-mL P	Activity Scan	None
B1J8L9		W	<i>↓</i>	<i>↓</i>	1x500-mL G/P	UTOT_KPA: Uranium (1) <i>H9WL4</i>	HNO3 to pH <2

Relinquished By BURATEK K.J. YOUNG	Print <i>K.J. Young</i> Sign <i>[Signature]</i>	Date/Time <i>1250</i> JULY 4 2006	Received By S. Welch S. Welch	Print <i>S. Welch</i> Sign <i>[Signature]</i>	Date/Time <i>1250</i> JULY 4 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By	Date/Time



STL

Sample Check-in List

Date/Time Received: 7-24-06 12:50

Client: PGW

SDG #: W04970

NA ☐

SAF #: 506-006

NA ☐

Work Order Number: 566240170

Chain of Custody # 506-006-80

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☐ No ☒
4. Cooler temperature: _____ NA ☐ 5. Vermiculite/packing materials is NA ☐ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☒ No ☐
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Welch

Date: 7-24-06 12:50

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL <i>J6624071</i> <i>W04970</i> <i>Due 9.7-06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # W06-007-114	
				Page <u>1</u> of <u>1</u>	
Collector <i>DURATEK K.J. YOUNG</i>		Contact/Requester Dot Stewart		Telephone No. <i>509-376-5056</i> MSIN FAX	
SAF No. W06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title RCRA JULY 2006		<i>DTIS-SAWS-H104</i>		Ice Chest No. <i>SML-442</i> Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol RCRA		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLH3		W	<i>7-24-06</i>	<i>1048</i>	1x20-mL P	Activity Scan	None
B1JLH3		W	<i>↓</i>	<i>↓</i>	1x500-mL G/P	UTOT_KPA: Uranium (1) <i>H9WMV</i>	HNO3 to pH <2

Relinquished By <i>DURATEK K.J. YOUNG</i> Print <i>[Signature]</i> Sign <i>[Signature]</i> Date/Time <i>1250</i> JULY 24 2006	Received By <i>S. Welch</i> Print <i>[Signature]</i> Sign <i>[Signature]</i> Date/Time <i>1250</i> JULY 24 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water LI = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By Date/Time	Received By Date/Time	
Relinquished By Date/Time	Received By Date/Time	
Relinquished By Date/Time	Received By Date/Time	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time		



STL

Sample Check-in List

Date/Time Received: 7-24-06 1250

Client: PBW

SDG #: W04970

NA ☐

SAF #: W06-007

NA ☐

Work Order Number: 566240171

Chain of Custody # W06-007-114

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☒ No ☐
4. Cooler temperature: _____ NA ☒ S: Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☐ No ☒
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Welch

Date: 7-24-06 12:50

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____
[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL <i>J66240173</i> <i>W04970</i> DURATEK R. R. FOX		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # W06-007-108	
				Page <u>1</u> of <u>1</u>	
Collector R. R. FOX		Contact/Requester Dot Stewart		Telephone No. 509-376-5056	
SAF No. W06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title RCRA JULY 2006		<i>Logbook: DTS-SAWS-H109</i>		Ice Chest No. <i>GRP-03-009</i> Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol RCRA		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLH0		W	<i>7/24/06</i>	<i>1309</i>	1x20-mL P	Activity Scan	None
B1JLH0		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1) <i>H9WM5</i>	HNO3 to pH <2

Relinquished By DURATEK R. R. FOX	Print <i>[Signature]</i> Sign	Date/Time <i>1345</i> <i>JUL 24 2006</i>	Received By <i>S. Welch</i>	Print <i>[Signature]</i> Sign	Date/Time <i>1345</i> <i>JUL 24 2006</i>	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By		Date/Time	Received By		Date/Time	
Relinquished By		Date/Time	Received By		Date/Time	
Relinquished By		Date/Time	Received By		Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
---------------------------------	--	-------------	-----------



STL

Sample Check-in List

Date/Time Received: 7.24.06 13:45

Client: P6W

SDG #: W04970

NA ☐

SAF #: W06-007

NA ☐

Work Order Number: 166240173

Chain of Custody # W06-007-108

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☐ No ☒
4. Cooler temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH 2 ☒ pH > 2 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☒ No ☐
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Wilson

Date: 7.24.06 13:45

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL <i>J6 G240185</i> <i>W04970</i> <i>Due 9-7-06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # <div style="text-align: center; font-weight: bold; font-size: 1.2em;">S06-007-2</div>	
				Page <u>1</u> of <u>1</u>	
Collector DURATEK R. R. FOX		Contact/Requester Dot Stewart		Telephone No. MSIN FAX 509-376-5056	
SAF No. S06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title SURV JULY 2006		<i>Logbook: DTS-SAWS-H109</i>		Ice Chest No. <i>6RP-03-009</i> Temp	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JL17		W	<i>7/24/06</i>	<i>1208</i>	1x20-mL P	Activity Scan	None
B1JL17		W	↓	↓	3x1000-mL P	TRITIUM_ELECT_LSC_LL: H-3 (1) <i>H9WVV</i>	None

Relinquished By DURATEK R. R. FOX	Print 	Sign 	Date/Time <i>1345</i> <i>JUL 24 2006</i>	Received By <i>S. Welch</i>	Print 	Sign 	Date/Time <i>1345</i> <i>JUL 24 2006</i>	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time	

PNNL 166240185 W04970 Due 9-7-06		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S06-007-54		
Collector DURATEK R. R. FOX		Contact/Requester Dot Stewart		Telephone No. 509-376-5056		MSIN FAX		
SAF No. S06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code				
Project Title SURV. JULY 2006		Logbook: DTS-SAWS-H109		Ice Chest No. 6RP-03-009		Temp.		
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.				
Protocol SURV		Priority: 45 Days		Offsite Property No.				
POSSIBLE SAMPLE HAZARDS/REMARKS ** **				SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL				
Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B1JL19		W	7/24/06	1041	1x20-mL P	Activity Scan	None	
B1JL19		W	↓	↓	3x1000-mL P	TRITIUM_ELECT_LSC_LL: H-3 (1) H9WWWW	None	
<div>2.0000 7/24/06</div>								
Relinquished By DURATEK R. R. FOX		Print	Sign	Date/Time JUL 24 2006 13:45	Received By S. Welch S. Welch		Print Sign Date/Time JUL 24 2006 1345	Matrix *
Relinquished By		Date/Time	Date/Time	Received By		Date/Time	S = Soil DS = Drum Solid SE = Sediment DI. = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water LI. = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By		Date/Time	Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time	

PNNL 6240185 W04970 DURATEK R. R. FOX		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # S06-007-55	
				Page <u>1</u> of <u>1</u>	
Collector R. R. FOX		Contact/Requester Dot Stewart		Telephone No. 509-376-5056 MSIN FAX	
SAF No. S06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title SURV JULY 2006		Logbook: 6RP DTS-SAWS-H109		Ice Chest No. 6RP-03-004 Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JL20		W	7/24/06	0830	1x20-mL P	Activity Scan	None
B1JL20		W	↓	↓	3x1000-mL P	TRITIUM_ELECT_LSC_LL: H-3 (1) H9uwx	None

Relinquished By DURATEK R. R. FOX	Print 	Sign 	Date/Time JUL 24 2006	Received By S. Welch	Print 	Sign 	Date/Time JUL 24 2006	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other				
Relinquished By	Date/Time	Received By	Date/Time					
Relinquished By	Date/Time	Received By	Date/Time					
Relinquished By	Date/Time	Received By	Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time		



STL

Sample Check-in List

Date/Time Received: 7-24-06 13:45

Client: PGW

SDG #: W04970

NA ☐

SAF #:

506-007

NA ☐

Work Order Number: 566240185 SW

Chain of Custody # 506-007-2,54,55

Shipping Container ID: 566240185

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☐ No ☐
3. Chain of Custody record present? Yes ☒ No ☐
4. Cooler temperature: _____ NA ☐ S: Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 3
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☐ pH > 2 ☒ adjusted pH ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☒ No ☐
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Welch

Date: 7-24-06 13:45

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL <i>J6G240196</i> <i>W04970</i> <i>Due 9-7-06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # <div style="border: 1px solid black; padding: 5px; text-align: center; font-weight: bold;"> I06-049-14 </div>	
				Page <u>1</u> of <u>1</u>	
Collector D.P. CONNOLLY		Contact/Requester Dot Stewart		Telephone No. 509-376-5056 MSIN FAX	
SAF No. I06-049		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title 2ZP1-LOL JULY 2006		<i>SAWSH106</i>		Ice Chest No. <i>5ML595</i> Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol CERCLA		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JKW9		W	<i>7-24-06</i>	<i>1039</i>	1x20-mL P	Activity Scan	None
B1JKW9		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JKW9		W			1x1000-mL P	906.0_H3_LSC: Tritium (1) <i>HPWWD</i>	None
B1JKW9		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JKW9		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2

Relinquished By D.P. CONNOLLY Print Sign <i>[Signature]</i> Date/Time <i>7/24/06</i>		Received By <i>S. Welch</i> Print Sign <i>[Signature]</i> Date/Time <i>7/24/06</i>		Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By Date/Time		Received By Date/Time		
Relinquished By Date/Time		Received By Date/Time		
Relinquished By Date/Time		Received By Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time		



STL

Sample Check-in List

Date/Time Received: 7-24-06 14:40

Client: P6W

SDG #: W04970

NA ☐

SAF #: _____

NA ☐

Work Order Number: 16G240196

Chain of Custody # _____

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☒ No ☐
4. Cooler temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☒ No ☐
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Weller

Date: 7-24-06 14:40

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL <i>J66240197</i> <i>W04970</i> <i>Due 9.7.06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # A06-007-11
		Page <u>1</u> of <u>1</u>		
Collector D.P. CONNOLLY		Contact/Requester Dot Stewart	Telephone No. 509-376-5056 MSIN FAX	
SAF No. A06-007		Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title LLWMA(4)-PA, JULY 2006		<i>SAWS 14106</i>		Ice Chest No. <i>5ML 585</i> Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.
Protocol Other		Priority: 45 Days		Offsite Property No.
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL	

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JK33		W	<i>7-24-06</i>	<i>1146</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JK33		W	<i>↓</i>	<i>↓</i>	1x20-mL P	Activity Scan <i>H9 WWS</i>	None
B1JK33		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JK33		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JK33		W	<i>↓</i>	<i>↓</i>	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By D.P. CONNOLLY	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 24 2006 <i>14:40</i>	Received By <i>S. Welch</i>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 24 2006 <i>14:40</i>	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	



STL

Sample Check-in List

Date/Time Received: 7.24.06 14:40

Client: P6W

SDG #: W04970

NA ☐

SAF #: A06-007

NA ☐

Work Order Number: 166240A7

Chain of Custody # A06-007-11

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact?

NA ☐ Yes ☒ No ☐

2. Custody Seals dated and signed?

NA ☐ Yes ☒ No ☐

3. Chain of Custody record present?

Yes ☒ No ☐

4. Cooler temperature: _____

NA ☒

S: Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐

6. Number of samples in shipping container: 1

7. Sample holding times exceeded?

NA ☒ Yes ☐ No ☐

8. Samples have:

_____ tape

_____ custody seals

_____ hazard labels

_____ appropriate samples labels

9. Samples are:

_____ in good condition

_____ broken

_____ leaking

_____ have air bubbles

(Only for samples requiring head space)

10. Sample pH taken?

NA ☐ pH < 2 ☒ pH > 2 ☐

adjusted pH ☐

11. Sample Location, Sample Collector Listed? *

*For documentation only. No corrective action needed.

Yes ☒ No ☐

12. Were any anomalies identified in sample receipt?

Yes ☐ No ☒

13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Welch

Date: 7.24.06 14:40

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL <i>U66256296</i> <i>W04970</i> <i>Due 9-8-06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # W06-007-138	
				Page <u>1</u> of <u>1</u>	
Collector R.T. SICKLE		Contact/Requester Dot Stewart		Telephone No. MSIN FAX 509-376-5056	
SAF No. W06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title RCRA, JULY 2006		<i>DT5-SAWJ-H106</i>		Ice Chest No. <i>SML595</i> Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol RCRA		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLJ5		W	<i>7-25-06</i>	<i>1353</i>	1x20-mL P	Activity Scan	None
B1JLJ5		W	<i>↓</i>	<i>↓</i>	1x500-mL G/P	UTOT_KPA: Uranium (1) <i>H901A</i>	HNO3 to pH <2

Relinquished By R.T. SICKLE <small>Print</small> <small>Sign</small>	Date/Time <i>1420</i> JUL 25 2006	Received By <i>L. Welch</i> <small>Print</small> <small>Sign</small>	Date/Time <i>1420</i> JUL 25 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water LI = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time				

PNNL <i>J66-250296</i> <i>W04970</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # W06-007-132	
		<i>Due 9-8-06</i>		Page <u>1</u> of <u>1</u>	
Collector <i>R.T. SICKLE</i>		Contact/Requester Dot Stewart		Telephone No. <i>509-376-5056</i> MSIN FAX	
SAF No. <i>W06-007</i>		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title <i>RCRA JULY 2006</i>		<i>DTS-SAWJ-H106</i>		Ice Chest No. <i>SMC 595</i> Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol RCRA		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLJ2		W	<i>7-25-06</i>	<i>1246</i>	1x20-mL P	Activity Scan	None
B1JLJ2		W	<i>1</i>	<i>1</i>	1x500-mL G/P	UTOT_KPA: Uranium (1) <i>H901D</i>	HNO3 to pH <2

Relinquished By <i>R.T. SICKLE</i>	Print 	Sign 	Date/Time <i>1420</i> JUL 25 2006	Received By <i>L. Welch</i>	Print 	Sign 	Date/Time <i>1420</i> JUL 25 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SI = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time	



STL

Sample Check-in List

Date/Time Received: 7-25-06 14:20

Client: PBW

SDG #: W04970

NA ☐

SAF #:

W06-007

NA ☐

Work Order Number: 166250096

Chain of Custody # W06-007-138, 132

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☒ No ☐
4. Cooler temperature: _____ NA ☐ 5. Vermiculite/packing materials is NA ☐ Wet ☐ Dry ☐
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☐ Yes ☒ No ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☒ No ☐
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: L. Welch

Date: 7-25-06 14:20

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL J66-250319 W04970 Due 9-8-06		<h2 style="margin:0;">CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</h2>		C.O.C. # <h3 style="margin:0;">S06-007-73</h3>	
		Page 1 of 1			
Collector R.T. SICKLE		Contact/Requester Dot Stewart		Telephone No. 509-376-5056 MSIN FAX	
SAF No. S06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title SURV. JULY 2006		DTS-SAWS-H106		Ice Chest No. SML595 Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLD3		W	7-25-06	1001	1x20-mL P	Activity Scan	None
B1JLD3		W	↓	↓	3x1000-mL P	TRITIUM_ELECT_LSC_LL: H-3 (1)	None
B1JLD3		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1JLD3		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JLD3		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1JLD3		W			1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3)	HNO3 to pH <2

Relinquished By R.T. SICKLE	Print 	Date/Time JUL 25 2006	Received By S. Welch	Print S. Welch	Date/Time JUL 25 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
Relinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By	Date/Time

PNNL 066250319 W04970 Due 9-8-06		<h2 style="margin:0;">CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</h2>		C.O.C. # <h1 style="margin:0;">S06-007-72</h1>	
				Page 1 of 1	
Collector R.T. SICKLE		Contact/Requester Dot Stewart		Telephone No. MSIN FAX 509-376-5056	
SAF No. S06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title SURV JULY 2006		DTS-SAWS-H/06		Ice Chest No. 8ML-595 Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLD2		W	7-25-06	1001	1x20-mL P	Activity Scan	None
B1JLD2		W			3x1000-mL P	TRITIUM_ELECT_LSC_LL: H-3 (1)	None
B1JLD2		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2) H9012	HNO3 to pH <2
B1JLD2		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JLD2		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1JLD2		W			1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3)	HNO3 to pH <2

Relinquished By R.T. SICKLE	Print	Sign	Date/Time JUL 25 2006	Received By <i>S. Welch</i>	Print	Sign	Date/Time JUL 25 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By	Date/Time	Received By	Date/Time						
Relinquished By	Date/Time	Received By	Date/Time						
Relinquished By	Date/Time	Received By	Date/Time						
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By	Date/Time



STL

Sample Check-in List

Date/Time Received: 7.25.06 14:20

Client: PGW

SDG #: W04970

NA ☐

SAF #: 506-007

NA ☐

Work Order Number: 16-250319

Chain of Custody # 506-007-73, 72

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☒ No ☐
4. Cooler temperature: _____ NA ☐ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☒ Yes ☒ No ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☒ No ☐
13. Description of anomalies (include sample numbers): Yes ☐ No ☒

Sample Custodian: S. Welch

Date: 7.25.06 14:20

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

PNNL <i>J66-250322</i> <i>W04970</i> <i>DURATEK Due 9.8.06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # W06-008-130
				Page <u>1</u> of <u>1</u>
Collector L. D. WALL		Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. W06-008		Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title RCRA, AUGUST 2006		<i>Logbook: DTS-SAWS-H109</i>	Ice Chest No. <i>GRP-03-004</i> Temp	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol RCRA		Priority: 45 Days		Offsite Property No.
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL	

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K2H2		W	<i>7/25/06</i>	<i>0915</i>	1x20-mL P	Activity Scan	None
B1K2H2		W			1x125-mL P	906.0_H3_LSC: Tritium (1) <i>H9022</i>	None
B1K2H2		W	↓	↓	1x1000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1K2H2		W	↓	↓	1x250-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1K2H2		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2

Relinquished By <i>L. D. WALL</i>	Date/Time <i>1425</i> JUL 25 2006	Received By <i>L. Wall</i>	Date/Time <i>1425</i> JUL 25 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		
		Disposed By		Date/Time



STL

Sample Check-in List

Date/Time Received: 7-25-06 14:25

Client: PGW

SDG #: W04970

NA ☐

SAF #: W06-008

NA ☐

Work Order Number: U66250322

Chain of Custody # W06-008-130

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☐ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☐ No ☒
4. Cooler temperature: _____ NA ☐ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☒ Yes ☐ No ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☐ No ☒
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Welch

Date: 7-25-06 14:25

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____

Date _____

[illegible]

PNNL J6G250324 W04970 <i>Due 9-8-06</i>		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # S06-007-68	
				Page <u>1</u> of <u>1</u>	
Collector DUPATEX F. M. HALL		Contact/Requester Dot Stewart		Telephone No. MSIN FAX 509-376-5056	
SAF No. S06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title SURV JULY 2006		<i>DTS SAWS-H/04</i>		Ice Chest No. <i>SML-442</i> Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLC9		W	<i>7-25-06</i>	<i>0831</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JLC9		W	<i>↓</i>	<i>↓</i>	1x20-mL P	Activity Scan <i>H903L</i>	None

Relinquished By DUPATEX F. M. HALL	Print <i>[Signature]</i> Sign <i>[Signature]</i> Date/Time <i>1447</i> JUL 25 2006	Received By <i>S. Welch</i> S. Welch Date/Time <i>1447</i> JUL 25 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water LI = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)	
		Disposed By Date/Time	

PNNL J66250324 W04970 DURATEX E.M. WALL		<h2 style="margin:0;">CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</h2>		C.O.C. # <h1 style="margin:0;">S06-007-60</h1>	
		Due 9-8-06		Page 1 of 1	
Collector		Contact/Requester Dot Stewart		Telephone No. MSIN FAX 509-376-5056	
SAF No. S06-007		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title SURV. JULY 2006		DTS-SMWS-H104		Ice Chest No. Temp. SML-442	
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** **			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JLC5		W	7-25-06	0908	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JLC5		W	↓	↓	1x20-mL P	Activity Scan H903m	None

Relinquished By DURATEX E.M. WALL	Print 	Sign 	Date/Time JUL 25 2006	Received By 	Print S. Welch	Sign 	Date/Time JUL 25 2006	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By	Date/Time	Received By	Date/Time						
Relinquished By	Date/Time	Received By	Date/Time						
Relinquished By	Date/Time	Received By	Date/Time						
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By	Date/Time



STL

Sample Check-in List

Date/Time Received: 7-25-06 14:47

Client: POW

SDG #: W04970

NA ☐ SAF #: 506-007 NA ☐

Work Order Number: 166250324

Chain of Custody # 60, 64, 68

Shipping Container ID: _____

Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☐ No ☒
4. Cooler temperature: _____ NA ☐ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 3
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape
____ custody seals
____ hazard labels
____ appropriate samples labels
9. Samples are:
____ in good condition
____ broken
____ leaking
____ have air bubbles
(Only for samples requiring head space)
adjusted pH ☐
10. Sample pH taken? NA ☐ pH < 2 ☐ pH > 2 ☒ Yes ☒ No ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes ☒ No ☐
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Walsh

Date: 7-25-06 14:47

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____